



Freeport-McMoRan Oil & Gas  
201 S. Broadway  
Orcutt, CA 93455

Telephone: 805-934-9111

April 22, 2014

Mr. Jared Blumenfeld  
Regional Administrator  
EPA, Region 9  
NPDES/DMR, WTR-7  
75 Hawthorne Street  
San Francisco, CA 94105-3901

Re: Discharge Monitoring Report - Platform Harvest NPDES Permit  
CAG280000

Dear Mr. Blumenfeld:

This letter and its attachments constitute the above captioned Discharge Monitoring Report (DMR). This DMR reporting period covers the months of January, February, and March 2014 for Platform Harvest.

The new General Permit became effective March 1, 2014. This DMR includes the months of January and February, which fall under the previous permit, and the month of March which falls under the new permit. The new permit monthly NPDES requirements are included in the DMR for sampling completed in March. Thus, this DMR includes the old permit limits for the months of January and February and the new permit limits for March.

Included herein are the following attachments:

Attachment 1 is comprised of the EPA DMR forms (3320-1).

Attachment 2 is a listing of the chemical inventory for miscellaneous discharges (specifically non-contact cooling and fire water) as required by II.F. of the subject permit.

Attachment 3 is the undissociated sulfide conversion calculation table in accordance with II.B.1.a. of the permit.

Attachment 4 provides pre-dilution and post dilution chlorine results for non-contact cooling and fire water discharges in accordance with Appendix D of the permit.

Mr. Blumenfeld  
April 22, 2014  
Page 2 of 3

Attachment 5 summarizes miscellaneous sampling results for extra testing that we initiated. All results were derived by an EPA approved test method in accordance with Part III.D. of the permit.

Attachment 6 includes a copy of a letter submitted to the EPA on February 24, 2014, regarding an exceedence of the oil and grease limit for produced water.

Attachment 7 includes copies of the official state certified lab reports associated with monitoring. Also included are the laboratory quality control reports for the lab reports and other required information (MLs, MDLs, EPA Methods, chains-of-custody, sample dates, etc.).

The following is a brief summary of some of the monitoring and reporting parameters affecting the various discharges:

**Drilling: (Discharge No. 001)**

There were no drilling activities during this quarter.

**Produced Water: (Discharge No. 002)**

Produced water was discharged throughout this reporting quarter. Weekly Oil and Grease (O&G) results are included in the DMR as end of pipe values.

A dilution ratio of 3578:1 was derived using the EPA "plumes UM" dilution model and the average flow rate from the previous DMR period, as defined in the permit. This dilution was applied to the quarterly testing results and the numeric values reported in the DMR are post dilution values for comparison to the permit limits listed in the permit under Appendix C for the old permit and Appendix B for the new permit.

On February 14, 2014, four oil and grease composite samples resulted in a value of 50.25 mg/l exceeding the maximum daily permit limit of 42 mg/l. All required notifications and corrective actions were made (refer to attachment 6). The monthly O&G average for the month of February were in compliance.

**Well Treatment, Completion and Workover Fluids (Discharge No 003)**

There were no well treatment, completion or workover fluid jobs performed during this quarter.

**Non-Contact Cooling Water and Fire Water: (Discharge No. 008, 009)**

Seawater is slightly chlorinated as it is pumped up onto the platform for both the non-contact cooling water loop and the fire water system as needed. Attachment 4 summarizes the official quarterly chlorine results including post dilution and end of pipe results.

Quarterly testing results and the numeric values reported in the DMR for chlorine for the months of January and February are post dilution values for comparison to the permit limits listed in the old permit, Appendix D. The new permit limits are listed in Appendix C and apply to results for the month of March.

The majority of the fire water that is discharged occurs once per week during a short fire water pump test. Separate EPA Plumes UM dilution models were run on the fire water and the non-contact cooling water systems and have been applied to the post dilution values reported in the DMR.

Freeport-McMoRan Oil and Gas uses a contractor to collect NPDES compliance monitoring samples at our offshore platforms. EPA sampling, preservation and documentation protocol is a strict requirement of our monitoring program.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C & 1001 and 33 U.S.C. & 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years)

If you should have any questions or require additional information, please contact me at (805) 934-8220.

Sincerely,



David Rose  
Manager  
Environmental, Health and Safety

#### Attachments

cc: Ms. Susan Zaleski, Bureau of Ocean Energy Management  
Ms. Alison Dettmer, California Coastal Commission  
Mr. James Salmons, Bureau of Safety Environmental Enforcement  
Platform Hermosa Foremen  
S.G. Lawry, LTS Environmental, Inc.

Platform Harvest

Attachment 1

EPA DMR  
PERMIT NO. CAG280000

Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
**WELL DISCHARGE MONITORING REPORT (Well DMR)**

CAG2B00000  
PERMIT NO.

001  
DISCHARGE NO.

PLATFORM HARVEST (OCS P-0315)  
LOCATION: 34°28'06"N, 120°40'51"W

**MONITORING PERIOD**

YR	MO	DAY	YR	MO	DAY
From:	14	01	01	To:	14 03 31

**DRILLING FLUIDS AND DRILL CUTTINGS (001)**

NOTE: Read instructions before completing this form.

PARAMETER (32-37)	Quantity or Loading			Quality or Concentration			NO. EX.	Frequency Analysis	Sample Type
	Average	Maximum	Units	Minimum	Average	Maximum			
<b>DRILLING FLUIDS VOLUME</b>									
Well # N / A									
January									
Measurement		No Discharge	Barrels/ well						
Permit Requirement		Report							
Sample		No Discharge	Barrels/ well						
February									
Measurement		No Discharge	Barrels/ well						
Permit Requirement		Report							
March									
Sample		No Discharge	Barrels/ well						
Requirement		Report							
<b>Quarterly Total</b>							0		
01/01/14 - 03/31/14									
<b>Annual Cumulative Volume Limit<sup>1</sup></b>							0		
03/01/13 - 02/28/14 and 03/01/14 - 02/28/15									
<b>TYPED OR PRINTED</b>							TELEPHONE	DATE	
COMMENT AND EXPLANATION OF ANY VIOLATION (Reference all attachments here.)									
David Rose Manager, Environmental, Health and Safety				 (805) 934-8220			04	22	2014
							MONTH/DAY/YEAR		
							Area Code	Number	

<sup>1</sup> Annual cumulative volume limit is applied to the cumulative volumes for the periods of March 2013 through February 2014, and March 2014 through February 2015. Due to the new permit, this DMR includes the first month of the new annual cumulative volume period. Therefore, annual cumulative volumes for two separate periods are recorded.

Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Circuit, Ca 93455

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
**WELL DISCHARGE MONITORING REPORT (Well DMR)**

CAC280000  
PERMIT NO.  
001

Approved Form  
OMB No. 2000-0015

PLATFORM HARVEST [OCS P-0315]  
LOCATION: 34°28'06"N, 120°40'51"W

**DRILL FLUIDS AND DRILL CUTTINGS (001)**

MONITORING PERIOD		YR	MO	DAY	YR	MO	DAY
From:	To:	14 01 01		14 03 31			

PARAMETER	Quantity or Loading			Quality or Concentration			NOTE: Read instructions before completing this form.						
	Average	Maximum	Units	Minimum	Average	Maximum							
<b>DRILL CUTTINGS VOLUME</b>													
Well # N/A	Sample	No Discharge	Barrels/ Month										
	Measurement	Permit	Report										
January	Requirement												
Well # N/A	Sample	No Discharge	Barrels/ Month										
	Measurement	Permit	Report										
February	Requirement												
Well # N/A	Sample	No Discharge	Barrels/ Month										
	Measurement	Permit	Report										
March	Requirement												
Annual Cumulative Volume Limit <sup>1</sup> 03/01/13 - 02/28/14 and 03/01/14 - 02/28/15	Sample	0	Barrels/ Year				0						
DRILL FLUIDS/CUTTINGS Free Oil	Measurement	Permit	25,000	# Days Sheen Observed	No Discharge	# Days Sheen Observed							
January	Requirement												
Well # N/A	Sample	No Discharge	Barrels/ Month										
	Measurement	Permit	Report										
February	Requirement												
March	Requirement												
<b>NAME/TITLE PRINCIPAL EXECUTIVE OFFICER</b>													
David Rose Manager, Environmental, Health and Safety	<i>David Rose</i>			(805) 934-8220			04 22 2014						
	Signature of PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT			Area Code Number			MONTH/DAY/YEAR						
<b>TYPED OR PRINTED</b>													
COMMENT AND EXPLANATION OF ANY VIOLATION (Reference all attachments here.)													

<sup>1</sup> Annual cumulative volume limit is applied to the cumulative volumes for the periods of December 2013 through February 2014, and March 2014 through February 2015. Due to the new permit, his DMR includes the first month of the new annual cumulative volume period. Therefore, annual cumulative volumes for two separate periods are recorded.

EPA Form 3320-1 (Rev. 9-88) Previous editions may be used.

(Replaces EPS Form T-40 which may not be used.)

File: DMR001.XLS

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Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
**WELL DISCHARGE MONITORING REPORT (Well DMR)**

CAG280000  
PERMIT NO.

001  
DISCHARGE NO.

PLATFORM HARVEST (OCS P-0315)  
LOCATION: 34°28'06"N, 120°40'51"W

**MONITORING PERIOD**  
From: 14 01 01 To: 14 03 31

PARAMETER	Quantity or Loading			Quality or Concentration		NO. EX.	Frequency Analysis	Sample Type
	Average	Maximum	Units	Maximum	Units			
<b>DRILLING FLUIDS</b>								
Toxicity Well No.	Sample Measurement			N / A		% by Volume		
	Permit Requirement			LC50 > 3% SPP		(0-80%) Well Footage		Grab
<b>DRILLING FLUIDS</b>								
Toxicity Well No.	Sample Measurement			N / A		% by Volume		
	Permit Requirement			LC50 > 3% SPP		(80-100%) Well Footage		Grab
<b>BARITE MERCURY</b>								
	Sample Measurement			N / A		mg / kg		
	Permit Requirement			1 mg / kg				Stock Barite
<b>BARITE CADMIUM</b>								
	Sample Measurement			N / A		mg / kg		
	Permit Requirement			3 mg / kg				Stock Barite
<b>DRILL FLUIDS CHEMICAL INVENTORY</b>								
Well No.	Sample Measurement			N / A		Each Mud System		Grab
	Permit Requirement			Report		Each Mud System		
<b>NO. DAYS DISCHARGE FOR EACH DRILLING FLUID</b>								
Well No.	Sample Measurement			N / A		# Days		
	Permit Requirement			Report		Each		
<b>PROHIBITED DISCHARGE</b>								
1. Oil-based Fluids				No Discharge		N/A		
2. Diesel Oil				No Discharge		N/A		
3. Non-aqueous based drilling fluids or cuttings				No Discharge		N/A		
<b>NAME/TITLE PRINCIPAL EXECUTIVE OFFICER</b>	<i>I CERTIFY UNDER PENALTY OF PERJURY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED BASED ON MY INQUIRY OF THE PERSONNEL WHO MANAGE THE SYSTEM, OR WHO PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION SUBMITTED IS. TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR GIVING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWINGLY GIVING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWINGLY VIOLATING SEE 18 USC § 1511 AND 31 USC § 1319. PENALTIES UNDER THESE STATUTES MAY INCLUDE FINE UP TO \$10,000 AND CRIMINAL IMPRISONMENT OF BETWEEN 10 MONTHS AND 5 YEARS.</i>							
<b>TYPED OR PRINTED</b>	<i>David Rose</i>							
<b>COMMENT AND EXPLANATION OF ANY VIOLATION</b>	(Reference all attachments here.)							
N/A: No discharge of drilling fluids								
NOTE: Read instructions before completing this form.								
<b>DRILLING FLUIDS AND DRILL CUTTINGS (001)</b>								

Approved Form  
OMB No. 2000-0015

(Replaces EPS Form T-40 which may not be used.)

File: DMR001.xls

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Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
**DISCHARGE MONITORING REPORT (DMR)**

CAG280000  
PERMIT NO.

2  
DISCHARGE NO.

PLATFORM HARVEST (OCS P-0315)  
LOCATION: 34°28'06"N, 120°40'51"W

**MONITORING PERIOD**

YR	MO	DAY	YR	MO	DAY
From: 14 01 01		To: 14 03 31			

Approved Form  
OMB No. 2000-0015

**PRODUCED WATER (002)**  
(commingled with WTCF)

NOTE: Read instructions before completing this form.

PARAMETER	Quantity or Loading				Quality or Concentration			NO. EX.	Frequency Analysis	Sample Type
	Average	Maximum	Units	Minimum	Average	Maximum	Units			
<b>PRODUCED WATER Flow Rate</b>	Sample	32,293	Monthly Average bbl/Day	32,293	0	1/day	Estimate			
	Measurement									
	Permit									
	Requirement									
	Sample	29,419	Monthly Average bbl/Day	29,419	0	1/day	Estimate			
	Measurement									
	Permit									
	Requirement									
	Sample	24,364	Monthly Average bbl/Day	24,364	0	1/day	Estimate			
	Measurement									
	Permit									
	Requirement									
<b>QUARTERLY AVERAGE Volume</b>	Sample	28,692	Quarterly Average bbl/Day	28,692	0	1/day	Estimate			
	Measurement									
	Permit									
	Requirement									
<b>January - March</b>	Sample	11,484,470	Barrels/Year	11,484,470	0	1/quarter	Estimate			
	Measurement									
	Permit									
	Requirement									
<b>ANNUAL CUMULATIVE Volume 1</b>	Sample	32,850,000	Barrels/Year	32,850,000	0	1/quarter	Estimate			
	Measurement									
	Permit									
	Requirement									
<b>ANNUAL CUMULATIVE Volume 1</b>	Sample	633,469	Barrels/Year	633,469	0	1/quarter	Estimate			
	Measurement									
	Permit									
	Requirement									
<b>NAME/TITLE PRINCIPAL EXECUTIVE OFFICER</b>	I CERTIFY UNDER PENALTY OF PERJURY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH THE SYSTEM DESIGNED TO ENSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED ON MY KNOWLEDGE OF THE PERSONS OR PERSONS WHO OWN OR OPERATE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR NON-WARNING VIOLATIONS. SEE 46 U.S.C. § 1416 AND 46 U.S.C. § 1316. PENALTIES UNDER THESE STATUTES MAY INCLUDE FINES UP TO \$10,000 AND IMPRISONMENT OF BETWEEN 6 MONTHS AND 1 YEAR.					(805) 934-8220	04 22 2014	TELEPHONE	DATE	
<b>TYPED OR PRINTED</b>					Signature of PRINCIPAL EXECUTIVE OFFICER or AUTHORIZED AGENT	Area Code	Number	MONTH/DAY/YEAR		
<b>COMMENT AND EXPLANATION OF ANY VIOLATION (Reference all attachments here.)</b>										

<sup>1</sup> Annual cumulative volume limit is applied to the cumulative volumes for the periods of March 2013 through February 2014, and March 2014 through February 2015. Due to the new permit, this DMR includes the first month of the new annual cumulative volume period. Therefore, annual cumulative volumes for two separate periods are recorded.

EPA Form 3320-1 (Rev.9-88) Previous editions may be used.

(Replaces EPS Form T-40 which may not be used.)

File: DMRR02.xls Pg 4 of 20

Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

# DISCHARGE MONITORING REPORT (DMR)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

CAG280000	PERMIT NO.
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002	DISCHARGE NO.
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PLATFORM HARVEST (OCS P-0315)  
LOCATION: 34°28'06"N, 120°40'51"W

MONITORING PERIOD				
YR	MO	DAY	YR	MO
From:	14	01	To:	14 03 31
	01			

## PARAMETER

PARAMETER		Quantity or Loading				Quality or Concentration			NO. EX.	Frequency Analysis	Sample Type	
		Average	Maximum	Units	Minimum	Average	Maximum	Units				
PRODUCED WATER Oil & Grease	January	Sample Measurement				15.7	23.0	mg/L	0	1/Week	Grab/Grab/Composite	
		Permit Requirement				29.0	42.0			1/Week		
		Sample Measurement			24.9	50.25		mg/L	1*	1/Week	Composite	
	February	Permit Requirement			29.0	42.0				1/Week	Grab/Composite	
		Sample Measurement			12.7	16.0		mg/L	0	1/Week	Grab/Grab/	
		Permit Requirement			29.0	42.0				1/Week	Composite	
March												
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER		I CERTIFY UNDER PENALTY OF PERJURY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED IN DUE AND SINCERE ACCORDANCE WITH SYSTEMS DESIGNED TO ACQUIRE DATA FROM UNIFIED PERSONNEL PROPERLY IDENTIFIED AND EVALUATE THE INFORMATION SUBMITTED DURING AN INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM. OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SAYING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT OR PAYING UP TO \$100,000 AND OR MAXIMUM IMPRISONMENT OF BETWEEN NINETY AND SEVEN YEARS.							TELEPHONE	DATE		
David Rose Manager, Environmental, Health and Safety								(805) 934-8220		04 22 2014		
Signature of PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT								Area Code Number		MONTH/DAY/YEAR		

\* Please refer to cover letter

FRA Form 3320-1 (Rev. 9-88) Previous editions may be used.

(Replaces FIPS Form T-40 which may not be used) File: DMR002.xls Page 5 of 20

File: DMR002.xls

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Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
**DISCHARGE MONITORING REPORT (DMR)**

CAGE280000  
PERMIT NO.  
0102  
DISCHARGE NO.

PLATFORM HARVEST (OCS P-0315)  
LOCATION: 34°28'06"N, 120°40'51"W

MONITORING PERIOD					
YR	MO	DAY	YR	MO	DAY
From: 14 01 01			To: 14 03 31		

**PRODUCED WATER (002)**  
Quarterly  
(commingled with WTCF)

NOTE: Read instructions before completing this form.

PARAMETER	Quantity or Loading				Quality or Concentration	NO. EX.	Frequency Analysis	Sample Type
	Average	Maximum	Units	Minimum				
<b>PRODUCED WATER CONSTITUENTS-QUARTERLY 1</b>								
JANUARY BENZENE								
Sample Measurement					0.00151	0.00151	mg/L	0 1 / quarter
Permit Requirement					0.0059	0.019		Grab
SAMPLE MEASUREMENT					NODI(B)	NODI(B)	mg/L	0 1 / quarter
BENZO(B)FLUORANTHENE					0.000018	0.000036		Grab
Sample Measurement					NODI(B)	NODI(B)	mg/L	0 1 / quarter
Permit Requirement					0.000018	0.000036		Grab
BENZO(K)FLUORANTHENE					NODI(B)	NODI(B)	mg/L	0 1 / quarter
Sample Measurement					0.000018	0.000036		Grab
BENZO(A)PYRENE					NODI(B)	NODI(B)	mg/L	0 1 / quarter
Sample Measurement					0.000018	0.000036		Grab
BENZO(A)ANTHRACENE					NODI(B)	NODI(B)	mg/L	0 1 / quarter
Sample Measurement					0.000018	0.000036		Grab
CHRYSENE					NODI(B)	NODI(B)	mg/L	0 1 / quarter
DIBENZO(A,H)ANTHRACENE					0.000018	0.000036		Grab
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER					0.000018	0.000036	TELEPHONE	DATE
David Rose Manager, Environmental, Health and Safety					(805) 934-8220	04 22 2014		
TYPED OR PRINTED							MONTH/DAY/YEAR	

COMMENT AND EXPLANATION OF ANY VIOLATION (Reference all attachments here.)  
Results are post-dilution, and the limits listed are post-dilution as listed in the old permit; Appendix C.

NODI(B): below MDL . The maximum value of the analytical result is less than the laboratory's MDL (below detection level).  
NODI(Q): equal to or above the MDL, but less than the ML or PQL. (Refer to Attachment 6 for MDLs and PQLs)  
Violations: See Title 14 C & 1800 AND 21 CFR 117 (Penalties under these statutes may include fine up to \$10,000 and/or imprisonment of between 1 month & 5 years)

Replaces EPR Form T-40 which may not be used.] [Replaces EPR Form T-40 which may not be used.]

File:DMR002.xls

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Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
**DISCHARGE MONITORING REPORT (DMR)**

CAG280000  
PERMIT NO.  
002  
DISCHARGE NO.

PLATFORM HARVEST (OCS P-0315)  
LOCATION: 34°28'06"N, 120°40'57"W

**MONITORING PERIOD**  
YR MO DAY YR MO DAY  
From: 14 01 01 To: 14 03 31

**PRODUCED WATER (002)**  
**QUARTERLY, Monthly**  
(commingled with W/T/CF)

Approved Form  
OMB No. 2000-0015

PARAMETER	Quantity or Loading				Quality or Concentration	NO. EX.	Frequency Analysis	Sample Type
	Average	Maximum	Units	Minimum				
<b>PRODUCED WATER CONSTITUENTS-QUARTERLY 1</b>					0.00200	0.00200	mg/L	0 / quarter
	Sample Measurement				0.00251	0.00335		Grab
<b>JANUARY COPPER</b>	Permit Requirement				0.046	0.046	mg/L	0 / quarter
	Sample Measurement				0.551	0.799		Grab
<b>AMMONIA</b>	Permit Requirement				0.0027	0.0027	mg/L	0 / quarter
	Sample Measurement				0.00393	0.0058		Grab
<b>UNDISSOCIATED SULFIDE</b>	Permit Requirement							
<b>PRODUCED WATER MONTHLY 2</b>	Sample Measurement				0.00148	0.00148	mg/L	0 / month
	Permit Requirement				0.0059	0.022		Grab
<b>MARCH BENZENE</b>	Sample Measurement				0.00304	0.00304	mg/L	0 / month
	Permit Requirement				0.00399	0.00579		Grab
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER								
David Rose Manager, Environmental, Health and Safety								
TYPED OR PRINTED								
COMMENT AND EXPLANATION OF ANY VIOLATION (Reference all attachments here.)								
1 Results are post-dilution, and the limits listed for the quarterly constituents are post-dilution as listed in the old permit, Appendix C. 2 The limits listed for the monthly constituents are post-dilution as listed in the new permit, effective March 1, 2014, Appendix B. NODl(B): below MDL. The maximum value of the analytical result is less than the laboratory's MDL (below detection level). NODl(Q): equal to or above the MDL, but less than the MDL or PQL.								
EPA Form 3320-1 (Rev.9-88) Previous editions may be used.								
[Replaces EPS Form T-40 which may not be used.]								
File:DMR002.xls								

I CERTIFY UNDER PENALTY OF PERJURY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR EXPRESSION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT ONLY AUTHORIZED PERSONNEL PROPERLY DRAFTED AND EVALUATE THE INFORMATION SUBMITTED DUE TO THE INHIBITION OF THE PERSON OR PERSONS WHO MAINTAIN THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE IMPOSITION FOR KNOWING VIOLATIONS. SEE 11 U.S.C. § 1131(c) (1)(B) AND 1133(c) (1)(B) (MATERIAL IMPROVEMENT OF BETWEEN INVESTIGATING AND SYSTEM).

  
DAVID ROSE  
(805) 934-8220  
04 22 2014  
MONTH/DAY/YEAR  
Signature of PRINCIPAL, EXECUTIVE OFFICER or AUTHORIZED AGENT  
Area Code Number

Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)**

**DISCHARGE MONITORING REPORT (DMR)**

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

003	DISCHARGE NO.
CAG280000	PERMIT NO.

PLATFORM HARVEST (OCS P-0315)  
LOCATION: 34°28'06"N, 120°40'51"W

WIT COMPETITION

**WELL TREATMENT, COMPLETION  
AND WORKOVER FLUIDS (003)**  
(Commissioned with produced water)

WINTERING LIND

Quality or Concentration										Frequency Analysis		Sample Type	
PARAMETER	Quantity or Loading					Maximum	Average	Units	NO. EX.	NOTE: Read instructions before completing this form.			
	Average	Maximum	Units	Minimum	Report								
WELL TREATMENT, COMPLETION AND WORKOVER FLUIDS Flow :	Sample Measurement Permit Requirement	No Discharge Report	Barrels / Job							1 / job	Estimate		
January	Sample Measurement Permit Requirement	No Discharge Report	Barrels / Job							1 / job	Estimate		
February	Sample Measurement Permit Requirement	No Discharge Report	Barrels / Job							1 / job	Estimate		
March	Sample Measurement Permit Requirement	No Discharge Report	Barrels / Job							1 / job	Estimate		
WELL TREATMENT, COMPLETION AND WORKOVER FLUIDS Oil and Grease :	Sample Measurement Permit Requirement	No Discharge Report	Barrels / Job							1 / job	Estimate		
January	Sample Measurement Permit Requirement	No Discharge Report	Barrels / Job							1 / job	Estimate		
February	Sample Measurement Permit Requirement	No Discharge Report	Barrels / Job							1 / job	Estimate		
March	Sample Measurement Permit Requirement	No Discharge Report	Barrels / Job							1 / job	Estimate		
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER										DATE			
I CERTIFY UNDER PENALTY OF PERJURY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED; BASED ON MY INDUSTRY-ONE PERSONNEL OR ENGINEERS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION; THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE OR MISLEADING INFORMATION, THE POSSIBILITY OF FINE AND IMPRISONMENT IF CO-CONSPIRACY VIOLATIONS SEE 18 U.S.C. 1510 AND 31 USC 4119 (PERPETRATOR UNDER THESE STATUTES MAY INCLUDE FINES UP TO \$10,000 AND CRIMINAL IMPRISONMENT OF BETWEEN MONTHS AND 5 YEARS).										Signature of PRINCIPAL EXECUTIVE OFFICER		Signature of OFFICER OR AUTHORIZED AGENT	
										Area Code	Number		

'When present, most of the WTCF are injected. If a small amount is commingled with produced water, effluent limitations and monitoring requirements are included with produced water monitoring (see 002), and thus reported as N/A.

EPA Form 3320-1 (Rev. 9-88) Previous editions may be used.

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File:DMR003.xls

(Replaces EPS Form T-40 which may not be used.) File:DMR003.xls Pg 8 of 20

Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

# **DISCHARGE MONITORING REPORT (DMR)**

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

003	DISCHARGE NO.
CAG280000	PERMIT NO.

PLATFORM HARVEST (OCS P-0315)  
LOCATION: 34°28'06"N 120°40'51"W

Approved Form  
OMB No. 2000-0015

**WELL TREATMENT, COMPLETION  
AND WORKOVER FLUIDS (003)**

MONITORING PERIOD							
YR	MO	DAY	YR	MO	DAY		
From:	14	01	01	To:	14	03	31

-2806 N. | 20403 | W

**COMMENT AND EXPLANATION OF ANY VIOLATION** (Reference all attachments here.)  
N / A: There were no jobs related to WTCF.  
'When present, most of the WTCF are injected. If a small amount is commingled with produced water, effluent limitations and monitoring requirements are included with produced water monitoring (see 002), and thus reported as N/A.

EFPA Form 33220-1 /Rev 0-88 Previous editions may be used

(Replaces FIPS Form T-40 which may not be used)  
File:DMR003.xls  
Page 9 of 20

Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
**DISCHARGE MONITORING REPORT (DMR)**

CAG280000  
PERMIT NO.

004  
DISCHARGE NO.

PLATFORM HARVEST (OCS P-0315)  
LOCATION: 34°28'06"N, 120°40'51"W

MONITORING PERIOD		
YR	MO	DAY
	From: 14 01 01	To: 14 03 31

**DECK DRAINAGE (004)**

Approved Form  
OMB No. 2000-0015

NOTE: Read instructions before completing this form.

PARAMETER	Quantity or Loading			Quality or Concentration			NO. EX.	Frequency Analysis	Sample Type
		Average	Units	Minimum	Average	Maximum			
<b>DECK DRAINAGE Volume -Flow Rate</b>	Sample Measurement	0.6	Mo. Avg. bbl/day						
January	Permit Requirement	Report					0	1/month	Estimate
	Sample Measurement	34.8	Mo. Avg. bbl/day						
February	Permit Requirement	Report					0	1/month	Estimate
	Sample Measurement	3.8	Mo. Avg. bbl/day						
March	Permit Requirement	Report					0	1/month	Estimate
<b>DECK DRAINAGE Free Oil</b>	Sample Measurement	0	# Days Sheen Observed	No free oil/visual sheen on the receiving water.			0	1/day	Visual - Daylight
January	Permit Requirement	0		No free oil/visual sheen on the receiving water.					
	Sample Measurement	0	# Days Sheen Observed	No free oil/visual sheen on the receiving water.			0	1/day	Visual - Daylight
February	Permit Requirement	0		No free oil/visual sheen on the receiving water.					
	Sample Measurement	0	# Days Sheen Observed	No free oil/visual sheen on the receiving water.			0	1/day	Visual - Daylight
March	Permit Requirement	0		No free oil/visual sheen on the receiving water.					
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS HERETO THEREUPON ARE IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED BASED ON MY KNOWLEDGE OF THE PERSONS OR PERSONS WHO HANDLE THE SYSTEM OR THOSE FREQUENTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THESE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS SEE 18 U.S.C. § 1510 AND 33 U.S.C. § 1311. IF I FAIL TO TESL THESE STATEMENTS MAY INCLUDE FINES UP TO \$10,000 AND OR WORKMANSHIP PENALTY OF BETWEEN 6 MONTHS AND 5 YEARS.								DATE
David Rose Manager, Environmental, Health and Safety	<i>David Rose</i> (805) 934-8220								04 22 2014
TYPED OR PRINTED	Signature of PRINCIPAL EXECUTIVE OFFICER or AUTHORIZED AGENT								MONTH/DAY/YEAR
COMMENT AND EXPLANATION OF ANY VIOLATION (Reference all attachments here.)									



Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
**DISCHARGE MONITORING REPORT (DMR)**

(2-16)  
CAG280000  
PERMIT NO.

005  
DISCHARGE NO.

PLATFORM HARVEST [OCS P-0315]  
LOCATION: 34°28'06"N, 120°40'51"W

**SANITARY & DOMESTIC WASTES (005)**

**MONITORING PERIOD**

YR	MO	DAY	YR	MO	DAY
From:	14	01	To:	14	03
					31

Approved Form  
OMB No. 2000-0015

PARAMETER	Quantity or Loading					Quality or Concentration			NO. EX.	Frequency Analysis	Sample Type
	Average	Maximum	Units	Minimum	Average	Maximum	Units				
SANITARY WASTE RESIDUAL Chlorine <sub>1</sub>	Sample Measurement			N/A	N/A	N/A	N/A	mg/l	0		
	Permit Requirement				1 mg/l	N/A	10 mg/l				
January	Sample Measurement			N/A	N/A	N/A	N/A	mg/l	Monthly	Grab	
	Permit Requirement				1 mg/l	N/A	10 mg/l				
February	Sample Measurement			N/A	N/A	N/A	N/A	mg/l	0	Monthly	Grab
	Permit Requirement				1 mg/l	N/A	10 mg/l				
March	Sample Measurement			N/A	N/A	N/A	N/A	mg/l	0	Monthly	Grab
DOMESTIC WASTES Flow Rate	11.2	Monthly Average bbl/day	bbl/day	1 mg/l	N/A	10 mg/l		mg/l	1/day	Estimate	Grab
January	Permit Requirement								0	1/month	Estimate
	Sample Measurement										
February	Permit Requirement								0	1/day	Estimate
March	Permit Requirement								0	1/month	Estimate
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	CERTIFY UNDER PENALTY OF PERJURY THAT THIS DOCUMENT AND ALL ATTACHMENTS THEREUPON ARE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED BASED ONLY IN MY KNOWLEDGE OF THE PERSON OR PERSONS WHO MAINTAIN THE SYSTEM. ON THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION SUBMITTED, I BELIEVE, THAT THEY ARE THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWINGLY VIOLATING SEE 18 U.S.C. § 1511 AND 31 U.S.C. § 1315. PENALTIES UNDER THESE STATUTES MAY INCLUDE FINES UP TO \$100,000 AND OR MAXIMUM IMPRISONMENT OF UP TO 20 YEARS.										
David Rose Manager, Environmental, Health and Safety	 (805) 934-8220										
TYPED OR PRINTED	MONTH/DAY/YEAR										
COMMENT AND EXPLANATION OF ANY VIOLATION (Reference all attachments here.)	Area Code Number										

<sup>1</sup> The sewage treatment unit is a marine sanitation device that complies with pollution control standards and regulations under Section 312 of the Clean Water Act.  
Thus, it is deemed to be in compliance with permit limitations for sanitary waste discharges (as per Condition II.E.1 Footnote 2 of CAG280000)

(Replaces EPS Form T-4d which may not be used.)

EPA Form 3320-1 (Rev.9-88) Previous editions may be used.

File: DMR005.xls

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Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca. 93455

**NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)**  
**DISCHARGE MONITORING REPORT (DMR)**

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)

CAG280000  
PERMIT NO

UNIVERSITY LIBRARY  
005

PLATFORM HARVEST (OCS P-0315)  
LOCATION: 34°28'06"N, 120°40'51"W

MONITORING PERIOD  
TO DAY YR MO DAY  
14 01 1996 14 03

BAPAMETED

PARAMETER		Quantity or Loading			Quality or Concentration			Sample Type			
		Average	Maximum	Units	Minimum	Average	Maximum	Units	NO. EX.		
<b>DOMESTIC WASTE</b> Foam / Floating Solids 1		Sample Measurement	0	# of Days Observed	No foam or floating solids in the receiving waters.				0	1/day	
January		Permit Requirement	0		No foam or floating solids in the receiving waters.				0	1/day	
February		Sample Measurement	0	# of Days Observed	No foam or floating solids in the receiving waters.				0	1/day	
		Permit Requirement	0		No foam or floating solids in the receiving waters.				0	1/day	
March		Sample Measurement	0	# of Days Observed	No foam or floating solids in the receiving waters.				0	1/day	
		Permit Requirement	0		No foam or floating solids in the receiving waters.				0	1/day	
										TELEPHONE	
										DATE	
<p>I CERTIFY UNDER PENALTY OF PERJURY THAT THIS DOCUMENT AND ALL ATTACHMENTS THERETO WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY OBTAIN AND EVALUATE THE INFORMATION SUBMITTED BASED ON AN INQUIRY OF THE PERSONS OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SELLING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT OF BETWEEN 6 MONTHS AND 5 YEARS VIOLATIONS. SEE 16 U.S.C. § 1061 AND 16 U.S.C. § 1015. PENALTIES UNDER THESE STATUTES MAY INCLUDE FINES UP TO \$100,000.00 OR DOUBLE IMPRISONMENT OF BETWEEN 6 MONTHS AND 5 YEARS.</p>										 <b>David Rose</b> Manager, Environmental, Health and Safety	
										SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER	
										Signature of PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	
										Area Code	
										Number	
										MONTH/DAY/YEAR	

Domestic Waste is discharged separately. Flow rate and observations for foam and floating solids in the receiving water are required.

FERIA Form 33220-1 (Rev. 8-88) Previous editions may be used.

(Berkleas EBS Form T-40 which must not be used)

File: DMB005.xls Pg 13 of 20

Approved Form  
OMB No. 2000-0015

SANITARY & DOMESTIC WASTES (005)

MONITORING PERIOD  
TO DAY YR MO DAY  
14 01 1996 14 03

PARAMETER		Quantity or Loading			Quality or Concentration			Sample Type			
		Average	Maximum	Units	Minimum	Average	Maximum	Units	NO. EX.		
<b>DOMESTIC WASTE</b> Foam / Floating Solids 1		Sample Measurement	0	# of Days Observed	No foam or floating solids in the receiving waters.				0	1/day	
January		Permit Requirement	0		No foam or floating solids in the receiving waters.				0	1/day	
February		Sample Measurement	0	# of Days Observed	No foam or floating solids in the receiving waters.				0	1/day	
		Permit Requirement	0		No foam or floating solids in the receiving waters.				0	1/day	
March		Sample Measurement	0	# of Days Observed	No foam or floating solids in the receiving waters.				0	1/day	
		Permit Requirement	0		No foam or floating solids in the receiving waters.				0	1/day	
										TELEPHONE	
										DATE	
<p>I CERTIFY UNDER PENALTY OF PERJURY THAT THIS DOCUMENT AND ALL ATTACHMENTS THERETO WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY OBTAIN AND EVALUATE THE INFORMATION SUBMITTED BASED ON AN INQUIRY OF THE PERSONS OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SELLING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT OF BETWEEN 6 MONTHS AND 5 YEARS VIOLATIONS. SEE 16 U.S.C. § 1061 AND 16 U.S.C. § 1015. PENALTIES UNDER THESE STATUTES MAY INCLUDE FINES UP TO \$100,000.00 OR DOUBLE IMPRISONMENT OF BETWEEN 6 MONTHS AND 5 YEARS.</p>										 <b>David Rose</b> Manager, Environmental, Health and Safety	
										SIGNATURE OF PRINCIPAL EXECUTIVE OFFICER	
										Signature of PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT	
										Area Code	
										Number	
										MONTH/DAY/YEAR	

Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
**DISCHARGE MONITORING REPORT (DMR)**

CAGZ800000  
PERMIT NO.

008  
DISCHARGE NO.

PLATFORM HARVEST (OCS P-0315)  
LOCATION: 34°28'06"N, 120°40'51"W

**FIRE CONTROL WATER (008)**

MONITORING PERIOD					
YR	MO	DAY	YR	MO	DAY
From: 14 01 01			To: 14 03 31		

Approved Form  
OMB No. 2000-0015

NOTE: Read instructions before completing this form.  
**FIRE CONTROL WATER (008)**

PARAMETER	Quantity or Loading				Quality or Concentration			NO. EX.	Frequency Analysis	Sample Type
	Average	Units	Minimum	Average	Maximum	Units				
<b>FIRE CONTROL SYSTEM TEST WATER (008) - Foam , Floating Solids</b>										
January										
Sample	0	# Days Observed	No floating solids in the receiving water.					0	1/day	Visual - Daylight
Measurement	0	# Days Observed	No foam in the receiving water.							
Permit Requirement	0	# Days Observed	No floating solids in the receiving water.							
February										
Sample	0	# Days Observed	No foam in the receiving water.					0	1/day	Visual - Daylight
Measurement	0	# Days Observed	No floating solids in the receiving water.							
Permit Requirement	0	# Days Observed	No foam in the receiving water.							
March										
Sample	0	# Days Observed	No floating solids in the receiving water.					0	1/day	Visual - Daylight
Measurement	0	# Days Observed	No foam in the receiving water.							
Permit Requirement	0	# Days Observed	No floating solids in the receiving water.							
<b>FIRE CONTROL SYSTEM TEST WATER (008) Chlorine 1</b>										
January										
Sample	0.0015	mg/l	0.0015	0.0015	0.0015	mg/l	0	2/quarter	Grab	
Measurement	0.0065	mg/l	0.0065	0.0065	0.0065	mg/l	1/quarter	Grab		
Permit Requirement	0.0012	mg/l	0.0012	0.0012	0.0012	mg/l	0	2/quarter	Grab	
<b>FIRE CONTROL SYSTEM TEST WATER (008) Chlorine 2</b>										
March										
Sample	0.0056	mg/l	0.0056	0.0056	0.0056	mg/l	1/quarter	Grab		
Measurement	0.0123	mg/l	0.0123	0.0123	0.0123	mg/l	0	1/month	List	
Permit Requirement	0.0012	mg/l	0.0012	0.0012	0.0012	mg/l	1/month	List		
<b>FIRE CONTROL SYSTEM TEST WATER (008) Chemical Inventory</b>										
January - March										
Sample	0	mg/l	0	0	0	mg/l	0	1/month	List	
Measurement	0	mg/l	0	0	0	mg/l	0	1/month	List	
Permit Requirement	0	mg/l	0	0	0	mg/l	0	1/month	List	
<b>NAME/TITLE PRINCIPAL EXECUTIVE OFFICER</b>								TELEPHONE	DATE	
David Rose Manager, Environmental, Health and Safety								(805) 934-8220	04 22 2014	
<b>TYPED OR PRINTED</b>										
<b>COMMENT AND EXPLANATION OF ANY VIOLATION (Reference all attachments here.)</b>										

Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
**DISCHARGE MONITORING REPORT (DMR)**

CAG280000  
PERMIT NO.

009  
DISCHARGE NO.

PLATFORM HARVEST (DCS P-0315)  
LOCATION: 34°28'06"N, 120°40'51"W

**NON-CONTACT COOLING WATER (009)**

MONITORING PERIOD				
YR	MO	DAY	YR	MO
From: 14 01 01 To: 14 03 31				

Approved Form  
OMB No. 2000-0015

PARAMETER	Quantity or Loading				Quality or Concentration			NO. EX.	Frequency Analysis	Sample Type
	Average	Units	Minimum	Average	Maximum	Units				
<b>NON-CONTACT COOLING WATER (009) - Flow Volume</b>										
January	Sample Measurement	190,000 Barrels/ Day						0	1/month	Estimate
	Permit Requirement	Report								
February	Sample Measurement	190,000 Barrels/ Day						0	1/month	Estimate
	Permit Requirement	Report								
March	Sample Measurement	190,000 Barrels/ Day						0	1/month	Estimate
	Permit Requirement	Report								
<b>NON-CONTACT COOLING WATER (009) - Foam &amp; Floating Solids</b>										
January	Sample Measurement	0 # Days Observed			No floating solids in the receiving water. No foam in the receiving water.			0	1/day	Visual - Daylight
	Permit Requirement	0			No floating solids in the receiving water. No foam in the receiving water.				1/day	Visual - Daylight
February	Sample Measurement	0 # Days Observed			No floating solids in the receiving water. No foam in the receiving water.			0	1/day	Visual - Daylight
	Permit Requirement	0			No floating solids in the receiving water. No foam in the receiving water.				1/day	Visual - Daylight
March	Sample Measurement	0 # Days Observed			No floating solids in the receiving water. No foam in the receiving water.			0	1/day	Visual - Daylight
	Permit Requirement	0			No floating solids in the receiving water. No foam in the receiving water.				1/day	Visual - Daylight
<b>COMMENT AND EXPLANATION OF ANY VIOLATION (Reference all attachments here.)</b>										
I, DAVID ROSE, IN THE DIRECTION OR SUPERINTENDENCE OR ACCORDANCE WITH A SYSTEM DESIGNED TO ASURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED, DATED OR MY KNOWLEDGE OF THE INFORMATION WHO MAKE UP THE SYSTEM, ON THOSE PERSONS DIRECTLY RESPONSIBLE FOR COLLECTING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 18 U.S.C. 1811 AND 31 U.S.C. 1319 (PENALTIES UNDER THESE STATUTES MAY INCLUDE UP TO \$100,000 OR MAXIMUM PENALTY FOR EACH VIOLATION AND 5 YEARS IN PRISON).										
<b>TYPED OR PRINTED</b>										
<b>NAME/TITLE, PRINCIPAL EXECUTIVE OFFICER</b>										
David Rose Manager, Environmental, Health and Safety										
<b>DATE</b>										
(805) 934-8220 04 22 2014										
<b>TELEPHONE</b>										
<b>MONTH/DAY/YEAR</b>										
Area Code Number										

Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
**DISCHARGE MONITORING REPORT (DMR)**

CAG280000	PERMIT NO.
009	DISCHARGE NO.

PLATFORM HARVEST [OCS P-0315]  
LOCATION: 34°28'06"N, 120°40'51"W

NON-CONTACT COOLING WATER / 0000

MONITORING PERIOD					
YR	MO	DAY	YR	MO	DAY
From: 14	01	01	To:	14	03

DOI: [10.1007/s00114-020-02000-w](https://doi.org/10.1007/s00114-020-02000-w)

<sup>1</sup> Chlorine values reported above are post-dilution by EPA. Plumes UM Chlorine limits are most-dilution as listed in the old permit. Appendix D New permit limits will be applied next quarter.

TELEGRAMS 22001 10-10-60 DRAFTED -

GENDERED FOOD FROM T 48 until t = 100

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Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
**DISCHARGE MONITORING REPORT (DMR)**

CAG280000  
PERMIT NO.

019  
DISCHARGE NO.

PLATFORM HARVEST (OCS P-0315)  
LOCATION: 34°28'06"N, 120°40'51"W

MONITORING PERIOD			
YR	MO	DAY	TO: 14 03 31
			From: 14 01 01

**EXCESS CEMENT SLURRY (019)**

Approved Form  
OMB No. 2000-0015

PARAMETER	Quantity or Loading			Quality or Concentration			NO. EX.	Frequency Analysis	Sample Type
	Average	Units	Minimum	Average	Maximum	Units			
EXCESS CEMENT SLURRY (019) Flow Volume	Sample Measurement	No Discharge	Monthly						
	Permit Requirement	Average	·bblday						
January	Report	·bblday						1 month	Estimate
EXCESS CEMENT SLURRY (019) Annual Cumulative Volume 1	Sample Measurement	No Discharge	Monthly						
	Permit Requirement	Average	·bblday						
February	Report	·bblday						1 month	Estimate
March	Report	·Average	·bblday					1 month	Estimate
EXCESS CEMENT SLURRY (019) Sheen Test/Free Oil Foam, Floating Solids	Sample Measurement	0	Barels/Year				0		
03/01/13 - 02/28/14 and 03/01/14 - 02/28/15	Permit Requirement	2,000							
EXCESS CEMENT SLURRY (019) Sheen Test/Free Oil Foam, Floating Solids	Sample Measurement	No Discharge	# Days, Sheen- Observed	No Discharge	No foam or floating solids			1 Well, Rec. Water	Visual, Rec. Water
January	Permit Requirement	None	No Free Oil	No Free Oil	No foam or floating solids			1 Well, Rec. Water	Visual, Rec. Water
February	Permit Requirement	None	No Free Oil	No Free Oil	No foam or floating solids			1 Well, Rec. Water	Visual, Rec. Water
March	Permit Requirement	None	No Free Oil	No Free Oil	No foam or floating solids			1 Well, Rec. Water	Visual, Rec. Water
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF PERJURY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ENSURE THAT UNQUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION CONTAINED, BASED ONLY ON MY OWN PERSONAL EXPERIENCE AND KNOWLEDGE. I AM RESPONSIBLE FOR MAINTAINING THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWINGLY VIOLATING SECTION 16 U.S.C. § 1881 AND 23 U.S.C. § 319. PENALTIES UNDER THESE STATUTES MAY INCLUDE UP TO \$10,000 AND OR A MAXIMUM IMPRISONMENT OF BETWEEN 1 MONTH AND 1 YEAR.								
David Rose Manager, Environmental, Health and Safety	 (805) 934-8220								
TYPED OR PRINTED	Area Code Number MONTH/DAY/YEAR								

COMMENT AND EXPLANATION OF ANY VIOLATION (Reference all attachments here.)

<sup>1</sup> Annual cumulative volume limit is applied to the cumulative volumes for the periods of March 2013 through February 2014, and March 2014 through February 2015.  
Due to the new permit, this DMR includes the first month of the new annual cumulative volume period. Therefore, annual cumulative volumes for two separate periods are recorded.

EPA Form 3320-1 (Rev. 9-88) Previous editions may be used.

(Replaces EPS Form T-40 which may not be used.)

File:DMR006.XLS Pg 17 of 20

Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
**DISCHARGE MONITORING REPORT (DMR)**

006.007.010.011.012.013.014  
DISCHARGE NO.

CAG280000  
PERMIT NO.

PLATFORM HARVEST (OCS P-0315)  
LOCATION: 34°28'06"N, 120°40'51"W

Blowout Preventer Fluids  
Desalination Unit  
Ballast/Storage Displacement  
Bilge Water  
Boiler Blowdown

**MONITORING PERIOD**  
YR MO DAY  
From: 14 01 01 To: 14 03 31

PARAMETER	Quantity or Loading				Quality or Concentration			NO. EX.	Frequency Analysis	Sample Type
	Average	Maximum	Units	Minimum	Average	Maximum	Units			
[006] BLOWOUT PREVENTER FLUIDS Free Oil, Foam, Floating Solids	Sample Measurement									
	Permit Requirement				No Discharge					
[007] DESALINATION UNIT Foam, Floating Solids	Sample Measurement									
	Permit Requirement				No free oil or floating solids in the receiving water.	No foam, in other than trace amounts, in the receiving water.				
[010] BALLAST/STORAGE DISPLACEMENT WATER - Flow Rate Free Oil, Foam, Floating Solids	Sample Measurement	No	Discharge	Monthly						
	Permit Requirement	Report	Report	Average	No free oil or floating solids in the receiving water.	No foam, in other than trace amounts, in the receiving water.				
[011] BILGE WATER Flow Rate	Sample Measurement	No	Discharge	Monthly						
	Permit Requirement	Report	Report	Average	No free oil or floating solids in the receiving water.	No foam, in other than trace amounts, in the receiving water.				
[012] BOILER BLOWDOWN Foam, Floating Solids	Sample Measurement				No Discharge					
	Permit Requirement				No free oil or floating solids in the receiving water.	No foam, in other than trace amounts, in the receiving water.				
[013] TEST FLUIDS *	Sample Measurement	No	Discharge	Monthly	No Discharge					
Flow Rate Free Oil, Foam, Floating Solids	Permit Requirement	Report	Report	Average	No free oil or floating solids in the receiving water.	No foam, in other than trace amounts, in the receiving water.				
[014] DIATOMACEOUS EARTH FILTER MEDIA Free Oil, Foam, Floating Solids	Sample Measurement				No Discharge					
	Permit Requirement				No free oil or floating solids in the receiving water.	No foam, in other than trace amounts, in the receiving water.				
NAME/TITLE PRINCIPAL EXECUTIVE OFFICER	I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED IN ACCORDANCE WITH THE SYSTEM DESIGNED TO ASSURE THAT OWNED DIRECTION OR SUPERVISION IN ACCORDANCE WITH THE SYSTEM DESIGNED TO ASSURE THAT OWNED PERSONNEL HAVE FULLY UNDERSTOOD AND EVALUATED THE INFORMATION SUBMITTED BASED ONLY IN PART ON THE PERSONNEL WHO MAINTAIN THE SYSTEM, OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION, THE INFORMATION IS SUBMITTED TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE, I AM AWARE THAT THESE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND PENALTIES UP TO \$100,000.00 AND UP TO 10 YEARS IN PRISON FOR KNOWINGLY VIOLATING SEE 18 U.S.C. 1510 AND 20 U.S.C. 1139 (PENALTY UNDER WHICH STATUTES MAY INCLUDE THE POSSIBILITY OF FINE AND PENALTIES UP TO \$100,000.00 AND UP TO 10 YEARS IN PRISON).									
David Rose Manager, Environmental, Health and Safety	 TYPED OR PRINTED									
COMMENT AND EXPLANATION OF ANY VIOLATION (Reference all attachments here.)	* See Attachment #2 for Chemical Inventory, if applicable									
	(Replaces EPS Form T-4d which may not be used.)									
	Signature of PRINCIPAL EXECUTIVE OFFICER OR AUTHORIZED AGENT									
	Area Code Number									
	MONTH/DAY/YEAR									
	DATE									
	(805) 934-8220 04 22 2014									

Freeport-McMoRan Oil & Gas LLC  
201 S. Broadway  
Orcutt, Ca 93455

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES)  
**DISCHARGE MONITORING REPORT (DMR)**

Approved Form  
OMB No. 2000-0015

CAG280000  
PERMIT NO.

015. 016. 017. 018. 020. 021  
DISCHARGE NO.

Uncontaminated Water  
Water Flooding Discharges  
Laboratory Wastes  
Muds, Cuttings, Cement at Sea  
Hydrotest Water

PLATFORM HARVEST (OCS P-0315)  
LOCATION: 34°28'06"N, 120°40'51"W

MONITORING PERIOD					
YR	MO	DAY	YR	MO	DAY
From: 14 01 01			To: 14 03 31		

PARAMETER	Quantity or Loading			Quality or Concentration			NO. OF READ INSTRUCTIONS BEFORE COMPLETING THIS FORM:	SAMPLE TYPE
	Sample	Average	Units	Minimum	Average	Maximum		
(015) BULK TRANSFER WATER OVERFLOW Foam, Floating Solids	Measurement							
January - March	Permit Requirement							
(016) UNCONTAMINATED WATER Foam, Floating Solids*	Sample Measurement							
January - March	Permit Requirement							
(017) WATER FLOODING DISCHARGES Free Oil, Foam, Floating Solids*	Sample Measurement							
January - March	Permit Requirement							
(018) LABORATORY WASTES Free Oil, Foam, Floating Solids (commingled with produced water)	Sample Measurement							
January - March	Permit Requirement							
(020) MUDS, CUTTINGS, CEMENT at SEA FLOOR	Sample Measurement							
Free Oil, Foam, Floating Solids	Permit Requirement							
January - March	Permit Requirement							
(021) HYDROTEST WATER Flow Rate / Free Oil, Foam Floating Solids	Sample Measurement							
January - March	Permit Requirement							
<b>NAME/TITLE PRINCIPAL EXECUTIVE OFFICER</b>	CERTIFY UNDER PENALTY OF PERJURY THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED BASED ON MY KNOWLEDGE OF THE PERSON OR PERSONS WHO MAINTAIN THE SYSTEM, OR TO ME, PERTAINING DIRECTLY RESPONSIBLE FOR OBTAINING THE INFORMATION, THE INFORMATION SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS. SEE 16 U.S.C. § 1811 AND 33 U.S.C. § 1319 (PENALTIES UNDER THESE STATUTES MAY INCLUDE UP TO \$10,000 AND OR MAXIMUM PENALTY OF FIVE YEARS).						<b>COMMENT AND EXPLANATION OF ANY VIOLATION (Reference all attachments here.)</b>	
David Rose Manager, Environmental, Health and Safety							TYPED OR PRINTED	
							DATE	
							(805) 934-8220 04 22 2014	
							MONTH/DAY/YEAR	
							Area Code Number	

EPA Form 3320-1 (Rev.9-98) Previous editions may be used.

(Replaces EPS Form T-40 which may not be used.)

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## Attachment 2

### Chemical Inventory

**ATTACHMENT 2**  
**PLATFORM HARVEST**  
**MISCELLANEOUS DISCHARGES**  
**CHEMICAL INVENTORY**  
**January 1, 2014 through March 31, 2014**

<u>Fluid Type</u>	<u>Volume</u> (Monthly avg bbls per day)	<u>Product Name</u>	<u>Estimated Chemical Quantity</u> (Monthly avg gal per day)	<u>Average End-of-Pipe <sup>2</sup> Concentration</u> (mg/l)
009 Non-contact Cooling Water				
January	190,000	Chlorine	0.80	0.1
February	190,000	Chlorine	1.60	0.2
March	190,000	Chlorine	1.60	0.2
008 Fire Control System Water <sup>1</sup>				
January	48	Chlorine	< 0.0001	< 0.1
February	54	Chlorine	< 0.0001	< 0.1
March	48	Chlorine	< 0.0001	< 0.1
013 Test Fluids	No Discharge	No Discharge	None	None
017 Water Flooding Discharges	No Discharge	No Discharge	None	None
021 Hydrotest Water	No Discharge	No Discharge	None	None

<sup>1</sup> Volumes estimated based on weekly firewater pump tests (refer to cover letter).

<sup>2</sup> Chemical quantity for non-contact cooling water calculated with Operations daily monitoring results using a non-EPA chlorine test method (Hach DPD Color Wheel).  
Firewater chlorine monitoring is performed on a weekly basis using a non-EPA chlorine test method (Hach DPD Color Wheel).

Attachment 3

Undissociated Sulfide Conversion  
Calculation Table

DMR: January - March 2014

### Multipoint Outfall Diffuser

## Platform Harvest- Percent Undissociated sulfides ( $H_2S$ ) vs Total Sulfide:

### Standard Methods 19th Edition 1995, page 4-129

Enter Temperature as Kelvin where Temp K = Temp C+273.15 (automatic conversion at the bottom of this page if in F).

		Calculation As fresh water		Calculation As ocean water		Calculation as produced water	
		A	0.501	A	-0.115	A	-0.139
Ocean pH	8.1						
Produced Water pH	6.9						
Ocean Water Temp	354.82 k						
Dissolved Sulfides (SM 4500-S2 F)	288.15 k						
Dilution (New Multipoint Outfall)	170 mg/l						
Conductivity (produced water)	3578 *						
"T" (produced water)	41200						
Conductivity (ocean water)	0.7						
"T" (ocean water)	51600						
% Undissociated sulfides ( $H_2S$ ):	0.83						
Conc. as $H_2S$ (undissociated)							
$H_2S$ Post Dilution (mg/l):							
$H_2S$ Post Dilution (ug/l): (DMR)							

\* Dilution calculated from quarterly average flow rate from the previous DMR quarter (per the Permit) and the outfall configuration for this reporting quarter.

Ocean water pH=8.1, salinity 30 g/kg as listed in the General NPDES permit.

$I = 1.6 \times 10^{-5}$  Conductivity (Stand. Methods 19th Edition, page 2-31).

Ocean water conditions for pH, Temp, Salinity, and conductivity will dominate over those for produced water at the edge of the 100m mixing zone.

pK (under ocean water) uses pK (7.11 as freshwater) in the PK calculation which also includes standard ocean conditions (for pH, Salinity, Temp).

### Temperature conversion:

C = 5/9 (F-32)	Temp F	Temp C	Temp. K
Produced Water: (Annual Cum. Avg.)	17.9	81.67	354.82

Ocean Water:

59 15.00 288.15 permitted

DMR: January - March 2014  
Multiport Outfall Diffuser

Platform Harvest- Percent Undissociated sulfides ( $H_2S$ ) vs Total Sulfide:  
Standard Methods 19th Edition 1995, page 4-129

Enter Temperature as Kelvin where Temp K= Temp C+273.15 (automatic conversion at the bottom of this page if in F).

	Calculation As fresh water		Calculation As ocean water		Calculation as Produced water	
	A	0.501	A	-0.115	A	-0.139
Ocean pH	8.1					
Produced Water pH	6.9					
Produced Water Temp.	354.82 k					
Ocean Water Temp.	288.15 k					
Dissolved Sulfides (SM 4560-S2 F)	190 mg/l					
Dilution (New Multiport Outfall)	3578 *					
Conductivity (produced water)	41200					
"I" (produced water)	0.7					
Conductivity (ocean water)	51600					
"I" (ocean water)	0.83					
% Undissociated sulfides ( $H_2S$ ):						
Conc. as $H_2S$ (undissociated)						
$H_2S$ Post Dilution (mg/l):						
$H_2S$ Post Dilution (ug/l): (DMR)						

\* Dilution calculated from quarterly average flow rate from the previous DMR quarter (per the Permit) and the outfall configuration for this reporting quarter.

Ocean water pH:8.1, salinity 30 g/kg as listed in the General NPDES permit.

I=1.6x10-5 Conductivity (Stand. Methods 19th Edition, page 2-31).

Ocean water conditions for pH, Temp, Salinity, and conductivity will dominate over those for produced water at the edge of the 100m mixing zone.  
pK (under ocean water) uses pK (7.11 as freshwater) in the pK calculation which also includes standard ocean conditions (for pH, Salinity, Temp).

Temperature conversion:	Temp F	Temp C	Temp. K
C = 5/9 (F-32)			
Produced Water: (Annual Cum. Avg.)	179	81.67	354.82
Ocean Water:	59	15.00	288.15

## **Attachment 4**

### **Non-Contact Cooling Water / Fire Water Chlorine Residual Results**

**ATTACHMENT 4**  
**PLATFORM HARVEST**  
**NON-CONTACT / FIRE WATER CHLORINE RESULTS**  
**January 1, 2014 through March 31, 2014**

<u>Discharge</u>		<u>Measurement Frequency</u>	Average Post Dilution (mg/l)	Maximum Post Dilution (mg/l)	Result Post Dilution (mg/l)	End-of-Pipe Concentration (mg/l)	EPA Plumes Dilution
008 Fire Control System Water	Sample Date: 01/09/14	Once/Quarter	0.0065	0.011	0.0015	0.28	180:1
009 Non-contact Cooling Water	Sample Date: 03/04/14	Once/Quarter	0.0056	0.0123	0.0012	0.22	180:1
		Once/Quarter	0.0065	0.011	0.0022	0.25	115:1

<sup>1</sup>Limits are post-dilution as listed in the old permit, Appendix D.

<sup>2</sup>Limits for samples completed in March are post-dilution as listed in the new permit, Appendix C.

## Attachment 5

### Miscellaneous NPDES Monitoring

**ATTACHMENT 5**  
**PLATFORM HARVEST**  
**MISCELLANEOUS MONITORING**  
**January 1, 2014 through March 31, 2014**

<b><u>Sample Location</u></b>	<b><u>Sample Date</u></b>	<b><u>Constituents</u></b>	<b><u>EPA Method</u></b>	<b><u>Lab Value</u></b>	<b><u>Units</u></b>
Ocean Water at Fire Water Pumps	1/16/2014	Specific Conductivity <sup>1</sup>	120.1	51,500	uhos/cm
	3/4/2014	Specific Conductivity <sup>1</sup>	120.1	51,600	uhos/cm
Produced Water	1/8/2014	Total Dissolved Sulfide	SM 4500S <sup>2</sup> F	170	mg/L
	3/4/2014	Total Dissolved Sulfide	SM 4500S <sup>2</sup> F	190	mg/L

<sup>1</sup> Specific Conductivity results were used in sulfide conversion calculations.

## **Attachment 6**

### **EPA Letter**



Freeport-McMoRan Oil & Gas  
201 S. Broadway  
Orcutt, CA 93455

Telephone: 805-739-9111

February 24, 2014

Mr. Eugene Bromley  
EPA Region IX, Water Division  
75 Hawthorne Street  
San Francisco, CA 94105

**Re:** Platform Harvest NPDES Permit No. CAG 280000:  
EPA Method 1664 Exceeds Limit

Dear Mr. Bromley:

This letter is in regards to the telephone call to you on February 20, 2014 by Bob Marsalek and Ruth Juris regarding lab reports received by Freeport-McMoRan Oil and Gas on February 19, 2014. As discussed, this report showed tests for Oil and Grease (O&G) on February 14, 2014 at 50.25 mg/L using EPA test method 1664 and averaging four grab samples. The daily max limit of 42 mg/l for O&G was exceeded.

It is believed that the high O&G on February 14<sup>th</sup> was caused by poor function of the Unicel on the platform. The investigation determined, with the aid of FMO&G's chemical representative, that the Unicel was inoperable due to plugged exchanger and an inefficient eductor. Subsequently, the platform was shut down on February 15, 2014. Upon restarting on February 16, 2014, platform operations continued to work through the issues but shut back down on February 18, 2014.

The Unicel has remained shut in for repairs and the platform was successfully returned to production on February 20, 2014 after returning the platform floatation cell back into service instead of the Unicel.

At no time did this situation present a hazard to human health or the environment.

Should you have any questions, please contact Ms. Ruth Juris at (805) 934-8215.

Sincerely,

A handwritten signature in blue ink, appearing to read "David Rose".

David Rose  
EH&S Manager

Attachments: PF Harvest NPDES Produced Water Weekly Lab Report



Analytical Services, Inc.

Environmental and Analytical Services-Since 1994

California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**Prepared for:** FM O&G  
C/O: LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
Attn: Steve Lawry

**Report Date:** February 19, 2014

**Laboratory Number:** 140428

**Project Name:** PF Harvest NPDES Produced Water Weekly

**Sampled by:** Client

On February 14, 2014, Capco Analytical Services, Inc. (CAS), received four(4) samples to be analyzed. The samples were identified and assigned the laboratory ID numbers listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
PRODUCED WATER	140428-01
PRODUCED WATER	140428-02
PRODUCED WATER	140428-03
PRODUCED WATER	140428-04

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Keith Chin-Yuan Chang, Ph.D.  
Director - Analytical Operations

cc: PF Harvest @-Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience.  
This report consists of 2 pages excluding the cover letter and the Chain of Custody.

This report shall not be reproduced except in full without the written approval of CAS. The test results reported represent only the item being tested and may not represent the entire material from which the sample was taken.



Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

#### CERTIFICATE OF ANALYSIS

Client: FM O&G (PF Harvest)  
CAS LAB NO: 140428  
Analyst: GM

Date Sampled: 02/13/14  
Date Received: 02/14/14  
Date Analyzed: 02/14/14  
Sample Matrix: Water

#### OIL & GREASE ANALYSIS EPA METHOD 1564

CAS LAB #	Sample ID	RESULTS		MDL (mg/L)	PQL (mg/L)
		(mg/L)	DF		
140428-01	Produced Water	52	1	1	5

#### QUALITY CONTROL DATA

140428-MB	Method Blank	ND	1	1	5
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Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

#### CERTIFICATE OF ANALYSIS

Client: FM O&G (PF Harvest)  
CAS LAB NO: 140428  
Analyst: GM

Date Sampled: 02/13/14  
Date Received: 02/14/14  
Date Analyzed: 02/17/14  
Sample Matrix: Water

#### OIL & GREASE ANALYSIS EPA METHOD 1664

CAS LAB #	Sample ID	RESULTS (mg/L)	DF	MDL (mg/L)	PQL (mg/L)
140428-02	Produced Water	44	1	1	5
140428-03	Produced Water	54	1	1	5
140428-04	Produced Water	51	1	1	5

#### QUALITY CONTROL DATA

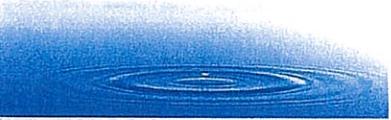
140428-MB	Method Blank	ND	1	1	5
-----------	--------------	----	---	---	---

LTS ENVIRONMENTAL, INC. 704 Adirondack Avenue Ventura, CA 93003 805-644-4560	Report to: FM O&G c/o Steve Lawry	Bill to: FM O&G Accounts Payable 700 Milam Site 3100 Houston, TX 77002			
FACILITY: <u>PV. Harvey</u>	COLLECTOR: <u>LTS</u>	SUBMITTED TO: Capco Analytical			
PROJECT/CHARGE #: <u>NPDES Produced Water Weekly</u>	RESULTS REQUIRED: <u>Standard</u>	REPORT TO: PHONE: FAX:			
RESULTS BY: PHONE: <u> </u>	RESULTS BY: FAX: <u> </u>	COPIES TO: Platform Supervisor 201 S. Broadway Orcutt, CA 93455			
ANALYSES REQUESTED (METHOD)					
SAMPLE NO.	SAMPLE ID/LOCATION	GRAB/COMP.	VOLUME	DATETIME COLLECTED	PRE-SERV.
1	Produced water	Grab	1.	02/13/94 0200	HCI O&G (EPA 1664) Run - 24 hr
2				0830	Hold
3				0900	Hold
4				0915	Hold 140428
Comments: Run #4: Hold 2-4 Field samples = 12 drops (2:6) = 120 mg/L					
Relinquished by: Received by: Date: Time:	Date: 2/14/94 Time: 11:00	Relinquished by: Received by: Date: Time:	Date: Time:		
Relinquished by: Received by: Date: Time:	Relinquished by: Received by: Date: Time:	Relinquished by: Received by: Date: Time:	Relinquished by: Received by: Date: Time:		

## Attachment 7

Laboratory reports for Oil and Grease  
and additional NPDES monitoring

Laboratory Quality Control Reports



**LTS ENVIRONMENTAL, INC.**

Freeport-McMoRan O&G  
201 S. Broadway  
Orcutt, Ca 93455

January 17, 2014

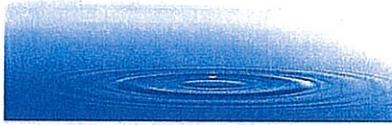
**Attn: David Rose**

Quarterly NPDES chlorine residual on the non-contact cooling water and fire water outlets were as follows:

<u>Date/Time</u>	<u>Location</u>	<u>Total Chlorine Residual</u> (EPA 330.5)
January 9, 2014 @ 0730 hrs	Platform Harvest	
January 9, 2014 @ 0745 hrs	Firewater outlet	0.28 mg/l
	Non-contact cooling water outlet	0.25 mg/l
LTS Meter S/N: 12040E195572		Method Blank: < 0.02mg/l
Technician: Mike Apple		



**S.G. Lawry**  
*Environmental Specialist / LTS*



## LTS ENVIRONMENTAL, INC.

Freeport-McMoRan O&G  
201 S. Broadway  
Orcutt, Ca 93455

March 14, 2014

**Attn: David Rose**

Quarterly NPDES chlorine residual on the non-contact cooling water and fire water outlets were as follows:

<u>Date/Time</u>	<u>Location</u>	<u>Total Chlorine Residual</u> (EPA 330.5)
March 4, 2014 @ 1130 hrs	Platform Harvest Firewater outlet	0.22 mg/l
LTS Meter S/N: 12040E195572 Technician: Mike Apple		Method Blank: < 0.02mg/l



**S.G. Lawry**  
*Environmental Specialist / LTS*



August 13, 2013

### Quality Control

As part of the annual in-house quality control chlorine meter check and to ensure proper operation of the meters, LTS Environmental performed a total residual chlorine test with a known value obtained from RT Corporation. Results of this test are as follows:

Test Date	Total Residual Chlorine (EPA Method 330.5)
August 12, 2013	
LTS meter (SN 041200088375)	2.78 mg/l
LTS meter (SN 12040E195572)	2.74 mg/l
RT Corporation test sample:	
Certified Value	2.35 mg/l (+/- .0508)
Standard Deviation	0.208 mg/l
Acceptance Limits	1.73 – 2.98 mg/l
LTS Lead Technician: Mike Apple	Method Blank < 0.05 mg/l

**S.G. Lawry**  
*Environmental Specialist*  
*President, LTS*



Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**Prepared for:** FM O&G  
C/O: LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
Attn: Steve Lawry

**Report Date:** January 8, 2014

**Laboratory Number:** 140018

**Project Name:** PF Harvest Produced Water NPDES Weekly /

**Sampled by:** Client

On January 3, 2014, Capco Analytical Services, Inc. (CAS), received four(4) samples to be analyzed. The samples were identified and assigned the laboratory ID numbers listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
DIFFUSER NPDES	130018-01
DIFFUSER NPDES	130018-02*
DIFFUSER NPDES	130018-03*
DIFFUSER NPDES	130018-04*

\*HOLD PER CUSTOMER'S REQUEST

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Keith Chin-Yuan Chang, Ph.D.  
Director - Analytical Operations

cc: PF Harvest @-Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience.  
This report consists of 1 page excluding the cover letter and the Chain of Custody.

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Analytical Services, Inc.

Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

CERTIFICATE OF ANALYSIS

Client: FM O&G (PF Harvest)  
CAS LAB NO: 140027  
Analyst: GM

Date Sampled: 01/01/14  
Date Received: 01/03/14  
Date Analyzed: 01/06/14  
Sample Matrix: Water

OIL & GREASE ANALYSIS  
EPA METHOD 1664

CAS LAB #	Sample ID	RESULTS (mg/L)	DF	MDL (mg/L)	PQL (mg/L)
140027-01	Diffuser NPDES	5.7	1	1	5

QUALITY CONTROL DATA

140027-MB	Method Blank	ND	1	1	5
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140018

LTS ENVIRONMENTAL, INC. 704 Adirondack Avenue Ventura, CA 93003 805-644-4560		Report to: FM O&G c/o Steve Lawry		Bill to: FM O&G Accounts Payable 700 Milam Ste 3100 Houston, TX 77002	1/10 1/13			
FACILITY: <u>LTS</u>	COLLECTOR: <u>Produced Water NPDES Weekly</u>	PROJECT/CHARGE#: <u>Standard</u>	RESULTS REQUIRED: <u>Standard</u>	SUBMITTED TO: <u>Capco Analytical</u>				
RESULTS BY: PHONE: <u>      </u>	REPORT TO: <u>Platform Supervisor</u>	COPIES TO: <u>201 S. Broadway</u>	PHONE: <u>644-4560</u>	FAX: <u>5055 N. Hillside</u>	CC: <u>Melissa Daily</u>			
SAMPLE NO.	SAMPLE ID/LOCATION	GRAB/COMP.	VOLUME	DATE/TIME COLLECTED	PRE-SERV.	ANALYSES REQUESTED (METHOD)		
1	Dipper or NPDES	Grab	1	1/10/14 1545	HCl O&G (EPA 1664)	Run Hold		
2				1600				
3				1615		Hold		
4				1630		Hold		
Comments: Run 1; Hold 2-4 #1 IR (0:00); 1:00 (2:10)								
Relinquished by: <u>      </u>	Received by: <u>      </u>	Date: <u>1/31/14</u>	Time: <u>1305</u>	Relinquished by: <u>      </u>	Date: <u>      </u>	Time: <u>      </u>		
Received by: <u>      </u>	Date: <u>      </u>	Time: <u>      </u>	Relinquished by: <u>      </u>	Date: <u>      </u>	Time: <u>      </u>	Received by: <u>      </u>	Date: <u>      </u>	Time: <u>      </u>



Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**Prepared for:** FM O&G  
C/O: LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
**Attn:** Steve Lawry

**Report Date:** January 15, 2014  
**Laboratory Number:** 140094  
**Project Name:** PF Harvest (wk2) NPDES Weekly  
**Sampled by:** Client 1/9/14

On January 9, 2014, Capco Analytical Services, Inc. (CAS), received four(4) samples to be analyzed. The samples were identified and assigned the laboratory ID numbers listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
D.O. NPDES	130094-01
D.O. NPDES	130094-02*
D.O. NPDES	130094-03*
D.O. NPDES	130094-04*

\*HOLD PER CUSTOMER'S REQUEST

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Keith Chin-Yuan Chang, Ph.D.  
Director - Analytical Operations

cc: PF Harvest @-Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience.  
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Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

CERTIFICATE OF ANALYSIS

Client: FM O&G (PF Harvest)  
CAS LAB NO: 140094  
Analyst: GM

Date Sampled: 01/08/14  
Date Received: 01/09/14  
Date Analyzed: 01/13/14  
Sample Matrix: Water

OIL & GREASE ANALYSIS  
EPA METHOD 1664

CAS LAB #	Sample ID	RESULTS (mg/L)	DF	MDL (mg/L)	PQL (mg/L)
140094-01	D.O. NPDES	14	1	1	5

QUALITY CONTROL DATA

140094-MB	Method Blank	ND	1	1	5
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## Chain of Custody

140094

LTS Environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003

805-644-4560  
*Harvest w/2*

FACILITY:  
COLLECTOR:  
PROJECT/CHARGE #  
RESULTS REQUIRED:  
RESULTS BY: PHONE:  
FAX:

SUBMITTED TO: Capco Analytical Services 1/17  
REPORT TO: PHONE: \_\_\_\_\_  
COPIES TO: Platform Supervisor PHONE: 644-4560  
201 S. Broadway, Orcutt, CA 93455 PHONE: \_\_\_\_\_

SAMPLE NO.	SAMPLE ID/LOCATION	GRAB/COMP.	VOLUME	DATE/TIME COLLECTED	PRE-SERV	ANALYSES REQUESTED (METHOD)
1	D.O. NPDES	grab	1	Date: 1/8/94 Time: 1/900	HCl EPA 1664	Ab5(28) IR(19)
2		grab	1	1/9/95		Ab5(27) IR(19)
3		grab	1	1/9/95		All walls:
4	A	grab	1	1/9/95		Soil/brick field test: 100 ppm 32K HgS.
						* Only residue broke out in both
						Field sample bottle & ERA bottles.
						Did not show up on IR.

Comments: Run #1, Hold rest

Relinquished by: *John D. Smith* Date: 1/9/94  
Received by: \_\_\_\_\_ Time: 1/10/94

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
Received by: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: *John D. Smith* Date: 1/9/94  
Received by: \_\_\_\_\_ Time: \_\_\_\_\_



Analytical Services, Inc.

Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

Prepared for: FM O&G  
C/O: LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
Attn: Steve Lawry

Report Date: January 23, 2014

Laboratory Number: 140162

Project Name: PF Harvest wk(3) NPDES

Sampled by: Client

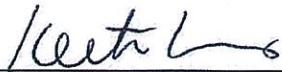
✓/k

On January 17, 2014, Capco Analytical Services, Inc. (CAS), received four(4) samples to be analyzed. The samples were identified and assigned the laboratory ID numbers listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
D.O./NPDES	130162-01
D.O./NPDES	130162-02*
D.O./NPDES	130162-03*
D.O./NPDES	130162-04*

\*HOLD PER CUSTOMER'S REQUEST

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.



Keith Chin-Yuan Chang, Ph.D.  
Director - Analytical Operations

cc: PF Harvest @-Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience.  
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Analytical Services, Inc.

Environmental and Analytical Services-Since 1994

California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

CERTIFICATE OF ANALYSIS

Client: FM O&G (PF Harvest)  
CAS LAB NO: 140162  
Analyst: GM

Date Sampled: 01/16/14  
Date Received: 01/17/14  
Date Analyzed: 01/22/14  
Sample Matrix: Water

OIL & GREASE ANALYSIS  
EPA METHOD 1664

CAS LAB #	Sample ID	RESULTS (mg/L)	DF	MDL (mg/L)	PQL (mg/L)
140162-01	D.O./NPDES	23	1	1	5

QUALITY CONTROL DATA

140162-MB	Method Blank	ND	1	1	5
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## Chain of Custody

140162

LTS Environmental, Inc.

704 Adirondack Avenue

Ventura, CA 93003

805-644-4560

Report to FM O&amp;G c/o Steve Lawry

Bill to: Accounts Payable  
700 Milam Ste 3100  
Houston, TX, 77002

FACILITY:

Collector:

PROJECT/CHARGE #

RESULTS REQUIRED:

RESULTS BY: PHONE:

Harvest

Wk (C3) NPDES

LTS

SUBMITTED TO:

REPORT TO:

COPIES TO:

Platform Supervisor

201 S. Broadway,

Orcutt, CA 93455

Ruth Juris

Date:

Time:

Date:

Date:

Time:

Date:

Time:

Date:



Environmental and Analytical Services-Since 1994

California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**Prepared for:** FM O&G  
C/O: LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
Attn: Steve Lawry

**Report Date:** January 22, 2014

**Laboratory Number:** 140092

**Project Name:** PF Harvest Quarterly NPDES Produced Water Monitoring

**Sampled by:** Client

1/8

On January 9, 2014, Capco Analytical Services, Inc. (CAS), received five (5) samples to be analyzed. The samples were identified and assigned the laboratory ID numbers listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
NPDES PROD. WATER	140092-01
NPDES PROD. WATER	140092-02
NPDES PROD. WATER	140092-03
NPDES PROD. WATER	140092-04
NPDES PROD. WATER	140092-05

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Keith Chin-Yuan Chang, Ph.D.  
Director - Analytical Operations

cc: PF Harvest @ Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience.  
This report consists of 10 pages excluding the cover letter and the Chain of Custody.

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Environmental and Analytical Services-Since 1994

Client:	FM O&G	Date Sampled:	01/09/14
Matrix:	WATER	Date Received:	01/09/14
Analyst:	BB	Date Analyzed:	01/21/14

BENZENE

EPA METHOD 602

Compound	Results ug/L	Dilution Factor	MDL ug/L	PQL ug/L	Surrogate %Recovery
CAS Lab # : MB-012114					
Client ID : METHOD BLANK		01/21/14			
	BQL	1	0.2	1.0	110%
CAS Lab # : 140092-03	-01				
Client ID : NPDES PROD. WATER		01/21/14			
	5400	300	0.2	1.0	107%



Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

#### CERTIFICATE OF ANALYSIS

Client: FM O&G, (PF Harvest)  
CAS LAB NO: 140092  
Analyst: ABE

Date Sampled: 01/08/14  
Date Received: 01/09/14  
Date Analyzed: 01/13/14  
Sample Matrix: Water

#### TOTAL COPPER EPA Method 200.7

CAS Lab #	Sample ID	RESULTS ( $\mu$ g/L)	Dilution Factor	PQL ( $\mu$ g/L)	MDL ( $\mu$ g/L)
140092-02	NPDES Prod. Water	7.0	1	20	4

#### QUALITY CONTROL SECTION

140092-MB	Method Blank	ND	1	20	4
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Environmental and Analytical Services Since 1994

CERTIFICATE OF ANALYSIS

Client: FM O&G (PF Harvest)  
CAS LAB NO: 140092  
Analyzed By: AN

Date Sampled: 01/08/14  
Date Received: 01/09/14  
Date Analyzed: 01/09/14  
Sample Matrix: Water

TOTAL SULFIDE  
EPA METHOD 4500S-2F

CAS LAB #	Sample ID	RESULTS (mg/L)	DF	MDL (mg/L)	PQL (mg/L)
140092-05	NPDES Prod Water	170	1	0.04	0.2

QUALITY CONTROL DATA

140092-MB Method Blank ND 1 0.04 0.2

mg/L: Milligrams/Liter (ppm)



Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

#### CERTIFICATE OF ANALYSIS

Client: FM O&G (PF Harvest)  
CAS LAB NO: 140092  
Analyst: AN

Date Sampled: 01/08/14  
Date Received: 01/09/14  
Date Analyzed: 01/10/14  
Sample Matrix: Water

#### AMMONIA (as N) EPA Method SM 4500NH<sub>3</sub>D

CAS Lab #	Sample ID	RESULTS (mg/L)	DF	PQL (mg/L)	MDL (mg/L)
140092-01	NPDES Prod. Water	165	1	0.1	0.02

#### QUALITY CONTROL DATA

140092-MB	Method Blank	ND	1	0.1	0.02
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mg/L: Milligrams/Liter (ppm)



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

Capco Analytical Services, Inc.  
1536 Eastman Avenue Suite B  
Ventura, CA 93003

Reported: 01/17/2014 9:32

Project: Water Samples

Project Number: BC LAB 140092

Project Manager: Rosa Hernandez

### Base Neutral and Acid Extractables Organic Analysis (EPA Method 625)

BCL Sample ID:	1400765-01	Client Sample Name:	140092-04, 1/8/2014 8:00:00AM, Client					
Constituent	Result	Units	PQL	MDL	Method	MB Bias	Lab Quals	Run #
Benzo[a]anthracene	ND	ug/L	2.0	0.38	EPA-625	ND		1
Benzo[b]fluoranthene	ND	ug/L	2.0	0.41	EPA-625	ND		1
Benzo[k]fluoranthene	ND	ug/L	2.0	0.31	EPA-625	ND		1
Benzo[a]pyrene	ND	ug/L	2.0	0.20	EPA-625	ND		1
Chrysene	ND	ug/L	2.0	0.63	EPA-625	ND		1
Dibenz[a,h]anthracene	ND	ug/L	3.0	0.26	EPA-625	ND		1
2-Fluorophenol (Surrogate)	60.7	%	30 - 120 (LCL - UCL)		EPA-625			1
Phenol-d5 (Surrogate)	70.2	%	12 - 110 (LCL - UCL)		EPA-625			1
Nitrobenzene-d5 (Surrogate)	92.9	%	60 - 130 (LCL - UCL)		EPA-625			1
2-Fluorobiphenyl (Surrogate)	67.2	%	55 - 125 (LCL - UCL)		EPA-625			1
2,4,6-Tribromophenol (Surrogate)	91.3	%	40 - 150 (LCL - UCL)		EPA-625			1
p-Terphenyl-d14 (Surrogate)	79.4	%	40 - 150 (LCL - UCL)		EPA-625			1

Run #	Method	Run			Analyst	Instrument	Dilution	QC
		Prep Date	Date/Time					
1	EPA-625	01/10/14	01/16/14 02:01		SKC	MS-B1	1	BXA0737



Environmental and Analytical Services-Since 1994

## QUALITY CONTROL SECTION



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

Capco Analytical Services, Inc.  
1536 Eastman Avenue Suite B  
Ventura, CA 93003

Reported: 01/17/2014 9:32

Project: Water Samples

Project Number: BC LAB 140092

Project Manager: Rosa Hernandez

## Base Neutral and Acid Extractables Organic Analysis (EPA Method 625)

### Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
<b>QC Batch ID: BXA0737</b>						
Benzo[a]anthracene	BXA0737-BLK1	ND	ug/L	2.0	0.38	
Benzo[b]fluoranthene	BXA0737-BLK1	ND	ug/L	2.0	0.41	
Benzo[k]fluoranthene	BXA0737-BLK1	ND	ug/L	2.0	0.31	
Benzo[a]pyrene	BXA0737-BLK1	ND	ug/L	2.0	0.20	
Chrysene	BXA0737-BLK1	ND	ug/L	2.0	0.63	
Dibenzo[a,h]anthracene	BXA0737-BLK1	ND	ug/L	3.0	0.26	
2-Fluorophenol (Surrogate)	BXA0737-BLK1	54.4	%	30 - 120 (LCL - UCL)		
Phenol-d5 (Surrogate)	BXA0737-BLK1	38.3	%	12 - 110 (LCL - UCL)		
Nitrobenzene-d5 (Surrogate)	BXA0737-BLK1	75.6	%	60 - 130 (LCL - UCL)		
2-Fluorobiphenyl (Surrogate)	BXA0737-BLK1	66.0	%	55 - 125 (LCL - UCL)		
2,4,6-Tribromophenol (Surrogate)	BXA0737-BLK1	87.2	%	40 - 150 (LCL - UCL)		
p-Terphenyl-d14 (Surrogate)	BXA0737-BLK1	48.1	%	40 - 150 (LCL - UCL)		

**BC****Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

Capco Analytical Services, Inc.  
 1536 Eastman Avenue Suite B  
 Ventura, CA 93003

Reported: 01/17/2014 9:32

Project: Water Samples

Project Number: BC LAB 140092

Project Manager: Rosa Hernandez

**Base Neutral and Acid Extractables Organic Analysis (EPA Method 625)****Quality Control Report - Laboratory Control Sample**

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	Control Limits		
							Percent Recovery	RPD	Lab Quals
<b>QC Batch ID: BXA0737</b>									
2-Fluorophenol (Surrogate)	BXA0737-BS1	LCS	45.835	80.000	ug/L	57.3	30 - 120		
Phenol-d5 (Surrogate)	BXA0737-BS1	LCS	32.467	80.000	ug/L	40.6	12 - 110		
Nitrobenzene-d5 (Surrogate)	BXA0737-BS1	LCS	61.848	80.000	ug/L	77.3	60 - 130		
2-Fluorobiphenyl (Surrogate)	BXA0737-BS1	LCS	55.527	80.000	ug/L	69.4	55 - 125		
2,4,6-Tribromophenol (Surrogate)	BXA0737-BS1	LCS	80.850	80.000	ug/L	101	40 - 150		
p-Terphenyl-d14 (Surrogate)	BXA0737-BS1	LCS	21.344	40.000	ug/L	53.4	40 - 150		



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

Capco Analytical Services, Inc.  
1536 Eastman Avenue Suite B  
Ventura, CA 93003

Reported: 01/17/2014 9:32

Project: Water Samples

Project Number: BC LAB 140092

Project Manager: Rosa Hernandez

## Base Neutral and Acid Extractables Organic Analysis (EPA Method 625)

### Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		
								Percent Recovery	Percent RPD	Lab Quals
<b>QC Batch ID: BXA0737</b>			Used client sample: N							
2-Fluorophenol (Surrogate)	MS	1325870-51	ND	46.902	80.000	ug/L		66.6	30 - 120	
	MSD	1325870-51	ND	48.802	80.000	ug/L	4.0	61.0	30 - 120	
Phenol-d5 (Surrogate)	MS	1325870-51	ND	34.029	80.000	ug/L		42.5	12 - 110	
	MSD	1325870-51	ND	34.494	80.000	ug/L	1.4	43.1	12 - 110	
Nitrobenzene-d5 (Surrogate)	MS	1325870-51	ND	62.368	80.000	ug/L		78.0	60 - 130	
	MSD	1325870-51	ND	64.058	80.000	ug/L	2.7	80.1	60 - 130	
2-Fluorobiphenyl (Surrogate)	MS	1325870-51	ND	55.669	80.000	ug/L		69.6	55 - 125	
	MSD	1325870-51	ND	56.648	80.000	ug/L	1.7	70.6	55 - 125	
2,4,6-Tribromophenol (Surrogate)	MS	1325870-51	ND	82.508	80.000	ug/L		103	40 - 160	
	MSD	1325870-51	ND	86.422	80.000	ug/L	4.6	108	40 - 160	
p-Terphenyl-d14 (Surrogate)	MS	1325870-51	ND	22.705	40.000	ug/L		56.8	40 - 150	
	MSD	1325870-51	ND	22.572	40.000	ug/L	0.6	56.4	40 - 150	



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

Capco Analytical Services, Inc.  
1536 Eastman Avenue Suite B  
Ventura, CA 93003

Reported: 01/17/2014 9:32

Project: Water Samples

Project Number: BC LAB 140092

Project Manager: Rosa Hernandez

#### Notes And Definitions

MDL Method Detection Limit

ND Analyte Not Detected at or above the reporting limit

PQL Practical Quantitation Limit

RPD Relative Percent Difference

140092

LTS Environmental, Inc. 704 Adirondack Avenue Ventura, CA 93003 805-644-4560	Report to: FM O&G c/o LTS, 704 Adirondack Ave Ventura, CA 93003	Bill to: Same 700 Milam, Ste. 3100 Houston, Tx 77002
FACILITY: Platform Harvest	COLLECTOR: LTS /	SUBMITTED TO: Capco Analytical Services 1/17
PROJECT/CHARGE # Quarterly NPDES Produced Water Monitoring	RESULTS REQUIRED: (normal)Sulfides rush(48 hours)	REPORT TO: S.G. Lawry @ LTS COPIES TO: Platform Supervisor Ruth Juris @ 201 S Broadway Orcutt, Ca 93455
RESULTS BY: PHONE: FAX:		PHONE: 644-4560 PHONE: _____ PHONE: _____

ANALYSES REQUESTED (METHOD)					
SAMPLE NO.	SAMPLE ID	GRAB/COMP.	VOLUME	DATE/TIME COLLECTED	PRESERV.
1	NPDES Prod.Water	grab	500 mL plastic	1-3-17 860	H <sub>2</sub> SO <sub>4</sub>
2	NPDES Prod.Water	grab	1 L plastic	800	HNO <sub>3</sub>
3	NPDES Prod.Water	grab	240 mL VOA	800	* ice
4	NPDES Prod.Water	grab	1L Amber	800	EPA 602: Benzene
5	NPDES Prod.Water	grab	500 mL plastic	800	NaOH-Zn
6	OceanMaster @ File Water Humans	grab	1-9-17 780	/cc	Dissolved Sulfides (Method SM4500S-2F) (Dissolved sulfides were preserved & filtered in the field prior to submittal)
					Conductivity
					28 mg/L (nw)
					25 mg/L (nw)
					# Conductivity needs re-sample.

Comments: \* Analyse EPA 602 in 7 days - no preservative (HCl) added due to high bicarb. levels.

**Capco: Please report MDLs and PQLs on lab report**

Relinquished by: 	Date: 1-9-17 Time: /cc
Received by: 	Time: _____

Relinquished by: 	Date: _____ Time: _____
Received by: 	Time: _____

Relinquished by: 	Date: _____ Time: _____
Received by: 	Time: _____



Analytical Services, Inc.

Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

Prepared for: FM O&G

C/O: LTS Environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
Attn: Steve Lawry

Report Date: January 20, 2014

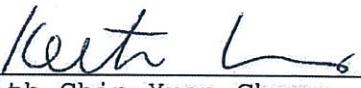
Laboratory Number: 140163

Project Name: PF Harvest Quarterly NPDES Produced Water Monitoring  
1/16

On January 17, 2013, Capco Analytical Services, Inc. (CAS), received one(1) sample to be analyzed. The sample was identified and assigned the laboratory ID number listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
OCEAN WATER @-FIRE WATER PUMPS	140163-01

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

  
Keith Chin-Yuan Chang, Ph.D.  
Director - Analytical Operations

cc: PF Harvest Supervisor @-Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience.  
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Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

### CERTIFICATE OF ANALYSIS

Client: FM O&G (PF Harvest)  
CAS LAB NO: 140163  
Analyst: AN

Date Sampled: 01/16/14  
Date Received: 01/17/14  
Date Analyzed: 01/17/14  
Sample Matrix: Water

#### SPECIFIC CONDUCTIVITY EPA Method 120.1

CAS LAB #	Sample ID	RESULTS (umho/cm)	DF	PQL (umho/cm)
140163-01	Ocean Water @-Fire Water Pumps	51500	1	1

140163

LTS Environmental, Inc. 704 Adirondack Avenue Ventura, CA 93003		Report to: FM O&G c/o LTS, 704 Adirondack Ave Ventura, CA 93003		Bill to: PXP 700 Milam, Ste. 3100 Houston, Tx 77002		
FACILITY: Platform Harvest		COLLECTOR: LTS /		1124		
PROJECT/CHARGE # Quarterly NPDES Produced Water Monitoring		RESULTS REQUIRED: normal				
RESULTS BY: PHONE: _____		FAX: _____				
SAMPLE NO.	SAMPLE ID	GRAB/ COMP.	VOLUME	DATE/TIME COLLECTED	PRESERV.	ANALYSES REQUESTED (METHOD)
1	Ocean Water @ Fire Water pumps	GRAB/	1	1/16/14 75cc	Ice	Conductivity. Re-sample (quarterly done last week)
Comments: _____						
Relinquished by:  Received by:		Date: 1/17/14 Time: 1310		Relinquished by: Received by:		Date: _____ Time: _____
Relinquished by: Received by:		Date: _____ Time: _____		Relinquished by: Received by:		Date: _____ Time: _____



Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

Prepared for: FM O&G

C/O: LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
Attn: Steve Lawry

Report Date: February 5, 2014

Laboratory Number: 140205

Project Name: PF Harvest Weekly NPDES

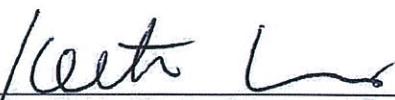
Sampled by: Client YJZ

On January 23, 2014, Capco Analytical Services, Inc. (CAS), received four(4) samples to be analyzed. The samples were identified and assigned the laboratory ID numbers listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
D.O./NPDES	130205-01
D.O./NPDES	130205-02*
D.O./NPDES	130205-03*
D.O./NPDES	130205-04*

\*HOLD PER CUSTOMER'S REQUEST

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

  
Keith Chin-Yuan Chang, Ph.D.

Director - Analytical Operations

cc: PF Harvest @-Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience. This report consists of 1 page excluding the cover letter and the Chain of Custody.

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Environmental and Analytical Services-Since 1994  
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CERTIFICATE OF ANALYSIS

Client: FM O&G (PF Harvest)  
CAS LAB NO: 140205  
Analyst: GM

Date Sampled: 01/22/14  
Date Received: 01/23/14  
Date Analyzed: 01/30/14  
Sample Matrix: Water

OIL & GREASE ANALYSIS  
EPA METHOD 1664

CAS LAB #	Sample ID	RESULTS (mg/L)	DF	MDL (mg/L)	PQL (mg/L)
140205-01	D.O./NPDES	13	1	1	5

QUALITY CONTROL DATA

140205-MB	Method Blank	ND	1	1	5
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140205

Chain of Custody

**FACILITY:** Harvest **COLLECTOR:** LTS **PROJECT/CHARGE #:** Weekly NPDES **RESULTS REQUIRED:** Normal

SUBMITTED TO: Capco Analytical Services **PHONE:** 913  
REPORT TO: Platform Supervisor **PHONE:** 644-4560  
COPIES TO: 201 S. Broadway, **PHONE:** \_\_\_\_\_

**Comments:** Run #1. Hold rest

Relinquished by: C. D. B. Date: j-23-14  
Received by: J. H. Time: 1/100  
Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
Received by: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
Received by: \_\_\_\_\_ Time: \_\_\_\_\_



Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**Prepared for:** FM O&G  
**C/O:** LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
**Attn:** Steve Lawry

**Report Date:** February 6, 2014  
**Laboratory Number:** 140258  
**Project Name:** PF Harvest wk(5) NPDES  
**Sampled by:** Client 1/28

On January 29, 2014, Capco Analytical Services, Inc. (CAS), received four(4) samples to be analyzed. The samples were identified and assigned the laboratory ID numbers listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
D.O./NPDES	140258-01
D.O./NPDES	140258-02*
D.O./NPDES	140258-03*
D.O./NPDES	140258-04*

\*HOLD PER CUSTOMER'S REQUEST

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

  
Keith Chin-Yuan Chang, Ph.D.  
Director - Analytical Operations

cc: PF Harvest @-Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience.  
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Analytical Services, Inc.

Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

CERTIFICATE OF ANALYSIS

Client: FM O&G (PF Harvest)  
CAS LAB NO: 140258  
Analyst: GM

Date Sampled: 01/28/14  
Date Received: 01/29/14  
Date Analyzed: 02/03/14  
Sample Matrix: Water

OIL & GREASE ANALYSIS  
EPA METHOD 1664

CAS LAB #	Sample ID	RESULTS (mg/L)	DF	MDL (mg/L)	PQL (mg/L)
140258-01	D.O./NPDES	23	1	1	5

QUALITY CONTROL DATA

140258-MB	Method Blank	ND	1	1	5
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### Chain of Custody

LTS Environmental, Inc. 704 Adirondack Avenue Ventura, CA 93003 805-644-4560		Report to FM O&G c/o Steve Lawry				
FACILITY: <u>Harvest wk(5) NPDES</u>	Bill to: Capco Analytical Services					
COLLECTOR: <u>LTS</u>	700 Milam Ste 3100 Houston, TX, 77002					
PROJECT/CHARGE # <u>Weekly NPDES</u>	PHONE: <u>644-4560</u>					
RESULTS REQUIRED: <u>Normal</u>	COPIES TO: <u>Platform Supervisor</u>					
RESULTS BY: PHONE: <u>                  </u>	PHONE: <u>                  </u>					
RESULTS BY: FAX: <u>                  </u>	PHONE: <u>                  </u>					
<p align="center"><b>SUBMITTED TO:</b> _____ <b>DATE/TIME:</b> _____</p> <p align="center"><b>REPORT TO:</b> _____ <b>TIME:</b> _____</p> <p align="center"><b>COPIES TO:</b> _____ <b>PHONE:</b> _____</p> <p align="center"><b>RESULTS REQUIRED:</b> _____ <b>PHONE:</b> _____</p> <p align="center"><b>RESULTS BY: PHONE:</b> _____ <b>PHONE:</b> _____</p> <p align="center"><b>RESULTS BY: FAX:</b> _____ <b>PHONE:</b> _____</p>						
SAMPLE NO.	SAMPLE ID/LOCATION	GRAB/COMP.	VOLUME	DATE/TIME COLLECTED	Pre-serv	ANALYSES REQUESTED (METHOD)
1	DONPDES	grab	1	Date: 1/28/14 Time: 1945	HCl	EPA 1664 online Hatch (8.8) Hatch 2100Q (15.0) IR (19)
2		grab	1	2000		/R values between 18-20
3		grab	1	2015		
4		grab	1	2030	▼	
Comments: <u>Run #1. Hold rest.</u>						
Relinquished by: <u>C. Lawry</u>	Date: <u>1-29-14</u>	Relinquished by: <u>Ruth Juris</u>	Date: <u>                  </u>			
Received by: <u>                  </u>	Time: <u>1/55</u>	Received by: <u>                  </u>	Time: <u>                  </u>			
Relinquished by: <u>J. P. S.</u>	Date: <u>1-29-14</u>	Relinquished by: <u>Ruth Juris</u>	Date: <u>                  </u>			
Received by: <u>                  </u>	Time: <u>12:00</u>	Received by: <u>                  </u>	Time: <u>                  </u>			

Comments: Run #1. Hold rest

Relinquished by: C. L. Hough Date: 1-29-14  
Received by: \_\_\_\_\_ Time: 1:55  
Relinquished by: C. L. Hough Date: 1-29-14  
Received by: \_\_\_\_\_ Time: 1:55

<u>Relinquished by:</u>	<u>Date:</u>
<u>Received by:</u>	<u>Time:</u>
<u>Relinquished by:</u>	<u>Date:</u>
<u>Received by:</u>	<u>Time:</u>



Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**Prepared for:** FM O&G  
C/O: LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
**Attn:** Steve Lawry

**Report Date:** February 11, 2014  
**Laboratory Number:** 140348  
**Project Name:** PF Harvest wk(1) NPDES  
**Sampled by:** Client *25*

On February 6, 2014, Capco Analytical Services, Inc. (CAS), received four(4) samples to be analyzed. The samples were identified and assigned the laboratory ID numbers listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
D.O./NPDES	140348-01
D.O./NPDES	140348-02*
D.O./NPDES	140348-03*
D.O./NPDES	140348-04*

\*HOLD PER CUSTOMER'S REQUEST

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Keith Chin-Yuan Chang, Ph.D.  
Director - Analytical Operations

cc: PF Harvest @-Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience.  
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Environmental and Analytical Services-Since 1994

California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**CERTIFICATE OF ANALYSIS**

Client: FM O&G (PF Harvest)  
CAS LAB NO: 140348  
Analyst: GM

Date Sampled: 02/05/14  
Date Received: 02/06/14  
Date Analyzed: 02/07/14  
Sample Matrix: Water

**OIL & GREASE ANALYSIS  
EPA METHOD 1664**

CAS LAB #	Sample ID	RESULTS (mg/L)	DF	MDL (mg/L)	PQL (mg/L)
140348-01	D.O./NPDES	29	1	1	5

**QUALITY CONTROL DATA**

140348-MB	Method Blank	ND	1	1	5
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Analytical Services, Inc.

Environmental and Analytical Services-Since 1994

California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**Prepared for:** FM O&G

C/O: LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
Attn: Steve Lawry

**Report Date:** February 19, 2014

**Laboratory Number:** 140428

**Project Name:** PF Harvest NPDES Produced Water Weekly

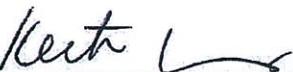
**Sampled by:** Client

2/13

On February 14, 2014, Capco Analytical Services, Inc. (CAS), received four(4) samples to be analyzed. The samples were identified and assigned the laboratory ID numbers listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
PRODUCED WATER	140428-01
PRODUCED WATER	140428-02
PRODUCED WATER	140428-03
PRODUCED WATER	140428-04

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

  
Keith Chin-Yuan Chang, Ph.D.  
Director - Analytical Operations

cc: PF Harvest @-Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience.  
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*Analytical Services, Inc.*

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**CERTIFICATE OF ANALYSIS**

Client: FM O&G (PF Harvest)  
CAS LAB NO: 140428  
Analyst: GM

Date Sampled: 02/13/14  
Date Received: 02/14/14  
Date Analyzed: 02/14/14  
Sample Matrix: Water

**OIL & GREASE ANALYSIS  
EPA METHOD 1664**

CAS LAB #	Sample ID	RESULTS		MDL (mg/L)	PQL (mg/L)
		(mg/L)	DF		
140428-01	Produced Water	52	1	1	5

**QUALITY CONTROL DATA**

140428-MB	Method Blank	ND	1	1	5
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Environmental and Analytical Services-Since 1994

California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

### CERTIFICATE OF ANALYSIS

Client: FM O&G (PF Harvest)  
CAS LAB NO: 140428  
Analyst: GM

Date Sampled: 02/13/14  
Date Received: 02/14/14  
Date Analyzed: 02/17/14  
Sample Matrix: Water

### OIL & GREASE ANALYSIS EPA METHOD 1664

CAS LAB #	Sample ID	RESULTS (mg/L)	DF	MDL (mg/L)	PQL (mg/L)
140428-02	Produced Water	44	1	1	5
140428-03	Produced Water	54	1	1	5
140428-04	Produced Water	51	1	1	5

### QUALITY CONTROL DATA

140428-MB	Method Blank	ND	1	1	5
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## LTS ENVIRONMENTAL, INC.

704 Adirondack Avenue

Ventura, CA 93003

805-644-4560

Report to: FM O&amp;G c/o Steve Lawry

Bill to: FM O&amp;G

Accounts Payable

700 Milam Ste 3100

Houston, TX 77002

2/17

FACILITY:

COLLECTOR:

PROJECT/CHARGE #

RESULTS REQUIRED:

RESULTS BY: PHONE:

SUBMITTED TO:

REPORT TO:

COPIES TO:

201 S. Broadway

Orcutt, CA 93455

Capco Analytical

PHONE:

FAX:

PHONE:

cc: Ruth Julian 4428

V1, Harvest

LTS

NPDES Produced Water Weekly

Standard

FAX: \_\_\_\_\_

ANALYSES REQUESTED (METHOD)

RUSH

HOLD



Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**Prepared for:** FM O&G  
**C/O:** LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
**Attn:** Steve Lawry

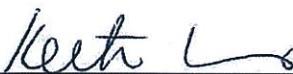
**Report Date:** February 24, 2014  
**Laboratory Number:** 140488  
**Project Name:** PF Harvest wk(3) NPDES weekly  
**Sampled by:** Client 2/24

On February 21, 2014, Capco Analytical Services, Inc. (CAS), received four(4) samples to be analyzed. The samples were identified and assigned the laboratory ID numbers listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
WEMCO/D.O.	140488-01
WEMCO/D.O.	140488-02*
WEMCO/D.O.	140488-03*
WEMCO/D.O.	140488-04*

\*HOLD PER CUSTOMER'S REQUEST

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

  
Keith Chin-Yuan Chang, Ph.D.  
Director - Analytical Operations

cc: PF Harvest @-Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience. This report consists of 1 page excluding the cover letter and the Chain of Custody.

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Analytical Services, Inc.

Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

CERTIFICATE OF ANALYSIS

Client: FM O&G (PF Harvest)  
CAS LAB NO: 140488  
Analyst: GM

Date Sampled: 02/21/14  
Date Received: 02/21/14  
Date Analyzed: 02/21/14  
Sample Matrix: Water

OIL & GREASE ANALYSIS  
EPA METHOD 1664

CAS LAB #	Sample ID	RESULTS (mg/L)	DF	MDL (mg/L)	PQL (mg/L)
140488-01	Wemco/D.O.	8.2	1	1	5

QUALITY CONTROL DATA

140488-MB	Method Blank	ND	1	1	5
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140488

## Chain of Custody

LTS Environmental, Inc.

704 Adirondack Avenue

Ventura, CA 93003

805-644-4560

Harvest-wk(3) NPDES

LTS

FACILITY:

COLLECTOR:

PROJECT/CHARGE #

RESULTS REQUIRED:

RESULTS BY: PHONE:

Ruth Juris

SUBMITTED TO:

REPORT TO:

COPIES TO:

FAX:

Capco Analytical Services

PHONE:

EPA 1664

Abs (17)

IR (13)

RUSH

Time:

Date:

12.21.14

7:15

HCL

Time:

7:30

Date:

12.21.14

7:45

Date:

12.21.14

8:00

Date:

12.21.14

8:15

Date:

12.21.14

8:30

Date:

12.21.14

8:45

Date:

12.21.14

9:00

Date:

12.21.14

9:15

Date:

12.21.14

9:30

Date:

12.21.14

9:45

Date:

12.21.14

10:00

Date:

12.21.14

10:15

Date:

12.21.14

10:30

Date:

12.21.14

10:45

Date:

12.21.14

11:00

Date:

12.21.14

11:15

Date:

12.21.14

11:30

Date:

12.21.14

Comments: Run #1. Hold 2-4

Relinquished by:		Date: 12.21.14
Received by:		Time: 1305
Relinquished by:		Date: _____
Received by:		Time: _____
Relinquished by:		Date: _____
Received by:		Time: _____

Bill to:	Accounts Payable
	700 Milam Ste 3100
	Houston, TX 77002

2/24



Analytical Services, Inc.

Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**Prepared for:** FM O&G  
C/O: LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
Attn: Steve Lawry

**Report Date:** February 27, 2014

**Laboratory Number:** 140519

**Project Name:** PF Harvest wk(4) NPDES weekly

**Sampled by:** Client 2/25

On February 26, 2014, Capco Analytical Services, Inc. (CAS), received four(4) samples to be analyzed. The samples were identified and assigned the laboratory ID numbers listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
WEMCO/D.O.	140519-01
WEMCO/D.O.	140519-02*
WEMCO/D.O.	140519-03*
WEMCO/D.O.	140519-04*

\*HOLD PER CUSTOMER'S REQUEST

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Keith Chin-Yuan Chang, Ph.D.  
Director - Analytical Operations

cc: PF Harvest @-Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience.  
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Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**CERTIFICATE OF ANALYSIS**

Client: FM O&G (PF Harvest)	Date Sampled: 02/25/14
CAS LAB NO: 140519	Date Received: 02/26/14
Analyst: GM	Date Analyzed: 02/26/14
	Sample Matrix: Water

**OIL & GREASE ANALYSIS  
EPA METHOD 1664**

CAS LAB #	Sample ID	RESULTS	DF	MDL (mg/L)	PQL (mg/L)
		(mg/L)			
140519-01	Wemco/D.O.	12	1	1	5

**QUALITY CONTROL DATA**

140519-MB	Method Blank	ND	1	1	5
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Chaitin-Gödel-W

३५

LTS Environmental, Inc. 704 Adirondack Avenue Ventura, CA 93003 805-644-4560		Report to FM O&G c/o S. Lawry				
		Bill to: Accounts Payable 700 Milam Ste 3100 Houston, TX 77002				
FACILITY: <u>Harvest wk(4) NPDES</u>	COLLECTOR: <u>LTS</u>	REPORT TO: Capco Analytical Services	PHONE:			
PROJECT/CHARGE # <u>Weekly NPDES</u>	RESULTS REQUIRED: <u>24-hr Rush</u>	COPIES TO: Platform Supervisor	PHONE: <u>644-4560</u>			
RESULTS BY: PHONE: <u>_____</u>	FAX: <u>_____</u>	Orcutt, CA 93455	PHONE: _____			
SUBMITTED TO: Ruth Juris						
SAMPLE NO.	SAMPLE ID/LOCATION	GRAB/COMP.	VOLUME	DATE/TIME COLLECTED	Pre-serv	ANALYSES REQUESTED (METHOD)
1	Wemco/D.O	grab	1	Date: 2/25/14 Time: 0100	HCl	EPA 1664 Abs (26) /R (18)
2		grab	1	115		online Hatch: 17.1 2100Q 9.43
3		grab	1	130		A-17 taken out of system : the rest of the system is in service.
4		grab	1	145		2.9 °C
Comments: Run #1. Hold rest.						
Relinquished by: <u>John Lawry</u>	Date: <u>2-26-'14</u>	Received by: <u>John Lawry</u>	Date: <u>1-320</u>			
Relinquished by: <u>_____</u>	Date: <u>_____</u>	Received by: <u>_____</u>	Date: <u>_____</u>			
Relinquished by: <u>_____</u>	Date: <u>_____</u>	Received by: <u>_____</u>	Date: <u>_____</u>			

Page 1



Environmental and Analytical Services-Since 1994

California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**Prepared for:** Freeport McMoRan O&G  
C/O: LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
Attn: Steve Lawry

**Report Date:** March 14, 2014

**Laboratory Number:** 140650

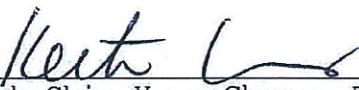
**Project Name:** PF Harvest Monthly NPDES Produced Water Monitoring

**Sampled by:** Client 34

On March 7, 2014, Capco Analytical Services, Inc. (CAS), received three (3) samples to be analyzed. The samples were identified and assigned the laboratory ID numbers listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
NPDES PROD. WATER	140650-01
NPDES PROD. WATER	140650-04
OCEAN WATER @-FIRE WATER PUMPS	140650-03

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

  
Keith Chin-Yuan Chang, Ph.D.  
Director - Analytical Operations

cc: PF Harvest @ Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience.  
This report consists of 3 pages excluding the cover letter and the Chain of Custody.

This report shall not be reproduced except in full without the written approval of CAS. The test results reported represent only the item being tested and may not represent the entire material from which the sample was taken.



Analytical Services, Inc.

Environmental and Analytical Services-Since 1994

Client: FM O&G

Date Sampled: 03/04/14

Matrix: WATER

Date Received: 03/07/14

Analyst: BB

Date Analyzed: 03/12/14

BENZENE

EPA METHOD 602

Compound	Results ug/L	Dilution Factor	MDL ug/L	PQL ug/L	Surrogate %Recovery
CAS Lab # : MB-031214					
Client ID : METHOD BLANK		03/12/14	1	0.2 1.0	91%
	BQL				
CAS Lab # : 140650 -01					
Client ID : NPDES PROD. WATER	5300 ✓	03/12/14 400	0.2	1.0	87%

Post Dil to 0.0015 mg/L



Analytical Services, Inc.

Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**CERTIFICATE OF ANALYSIS**

Client: Freeport McMoRan (PF Harvest)  
CAS LAB NO: 140650  
Analyst: AN/BB

Date Sampled: 03/04/14  
Date Received: 03/07/14  
Sample Matrix: Water

**WET CHEMISTRY SUMMARY**

COMPOUND	RESULTS	UNITS	DF	PQL	MDL	METHOD	ANALYZED
=====							
CAS Lab#:	140650-02						
Sample ID:	NPDES Prod.	Water					
Dissolved Sulfide	190	mg/L	1	0.2	0.04	4500S <sup>-2</sup> F	03/10/14
=====							
CAS Lab#:	140650-03						
Sample ID:	Ocean Water @-Fire	Water Pumps					
Spec. Conductivity	51600	umho/cm	1	1	---	120.1	03/07/14



Environmental and Analytical Services-Since 1994  
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QUALITY CONTROL SECTION

Sample ID: Method Blank  
CAS LAB NO: 140650-MB

Analyst: AN/BB

WET CHEMISTRY SUMMARY

CPMPOUND	RESULTS	UNITS	DF	PQL	MDL	METHOD	ANALYZED
Dissolved Sulfide	ND	mg/L	1	0.2	0.04	4500S <sup>-2</sup> F	03/10/14

DF: Dilution Factor

mg/L: Milligrams/Liter (ppm)

ND: Not Detected

-1  
40650

LTS Environmental, Inc.		Report to:	Freepo McMoRan O&G	Bill to:	Freepo McMoRan O&G
704 Adirondack Avenue Ventura, CA 93003		C/o	LTS, 704 Adirondack Ave Ventura, CA 93003		700 Milam, Ste. 3100
		805-644-4560		Houston, Tx 77002	<i>31</i>
FACILITY:	Platform Harvest	COLLECTOR:	LTS/ Monthly NPDES Produced Water Monitoring	SUBMITTED TO:	Capco Analytical Services
PROJECT/CHARGE #	RESULTS REQUIRED:	normal		REPORT TO:	S.G. Lawry @ LTS
RESULTS BY: PHONE:				COPIES TO:	Platform Supervisor (201 S Broadway, Orcutt) Ruth Juris (email)
SAMPLE	SAMPLE ID	GRAB/ COMP.	VOLUME	DATETIME	ANALYSES REQUESTED (METHOD)
NO.				COLLECTED	
1	NPDES Prod.Water	grab	240 mL	3-4-14 VOA 1630	* ice EPA 602: Benzene MDL: 3 ug/L
2	NPDES Prod.Water	grab	500 mL		NaOH-Zn Dissolved Sulfides (Method SM4500S-2F) (Dissolved sulfides were preserved & filtered in the field prior to submittal) 1630 Conductivity MDL: 20 ug/L 130 ppm
3	Ocean Water @ Fire Water pumps	grab		1/30 ice	.22 mg/L 57°F
Comments: * Analyse EPA 602 in 7 days - no preservative (HCl) added due to high bicarb. levels.					
Capco: Please report MDLs and PQLs on lab report					
Relinquished by:	<i>John D. Johnson</i>	Date:	03/07/14	Relinquished by:	Date:
Received by:	<i>Joe Johnson</i>	Time:	08:00	Received by:	Time:
Relinquished by:	<i>Joe Johnson</i>	Date:	3/07/14	Relinquished by:	Date:
Received by:	<i>Joe Johnson</i>	Time:	10:00	Received by:	Time:



Analytical Services, Inc.

Environmental and Analytical Services-Since 1994

California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**Prepared for:** Freeport McMoRan O&G  
C/O: LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
Attn: Steve Lawry

**Report Date:** March 14, 2014

**Laboratory Number:** 140649

**Project Name:** PF Harvest wk(1) NPDES weekly

**Sampled by:** Client 34

On March 7, 2014, Capco Analytical Services, Inc. (CAS), received four (4) samples to be analyzed. The samples were identified and assigned the laboratory ID numbers listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
WEMCO OUT/D.O.	140649-01
WEMCO OUT/D.O.	140649-02*
WEMCO OUT/D.O.	140649-03*
WEMCO OUT/D.O.	140649-04*

\*HOLD PER CUSTOMER'S REQUEST

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Keith Chin-Yuan Chang, Ph.D.  
Director - Analytical Operations

cc: PF Harvest @-Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience.  
This report consists of 1 page excluding the cover letter and the Chain of Custody.

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Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

CERTIFICATE OF ANALYSIS

Client: Freeport McMoRan O&G (PF Harvest) Date Sampled: 03/04/14  
CAS LAB NO: 140649 Date Received: 03/07/14  
Analyst: GM Date Analyzed: 03/12/14  
Sample Matrix: Water

OIL & GREASE ANALYSIS  
EPA METHOD 1664

CAS LAB #	Sample ID	RESULTS		MDL (mg/L)	PQL (mg/L)
		(mg/L)	DF		
140649-01	Wemco Out/D.O.	14	1	1	5

QUALITY CONTROL DATA

140649-MB	Method Blank	ND	1	1	5
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140649

### **Chain of Custody**

LTS Environmental, Inc. 704 Adirondack Avenue Ventura, CA 93003 <b>805-644-4560</b>	<b>Report to FM O&amp;G c/o S. Lawry</b> <i>LTS</i>	<b>Bill to:</b> Accounts Payable 700 Milam Ste 3100 Houston, TX, 77002																																			
FACILITY: COLLECTOR: PROJECT/CHARGE # RESULTS REQUIRED: RESULTS BY: PHONE:	<i>Harvest creek(1) NPDES</i> <i>LTS</i> Weekly NPDES Normal FAX: _____	SUBMITTED TO: <u>Capco Analytical Services</u> REPORT TO: <u>PHONE: 644-4560</u> COPIES TO: <u>Platform Supervisor</u> <u>201 S. Broadway,</u> <u>Orcutt, CA 93455</u> <i>Ruth Juris</i>																																			
<table border="1"> <thead> <tr> <th>SAMPLE NO.</th> <th>SAMPLE ID/LOCATION</th> <th>GRAB/COMP.</th> <th>VOLUME</th> <th>DATE/TIME COLLECTED</th> <th>Pre-serv</th> <th>ANALYSES REQUESTED (METHOD)</th> </tr> </thead> <tbody> <tr> <td>1</td> <td><i>memo off D.O.</i></td> <td>grab</td> <td>1</td> <td>Date: 3-4-14 Time: 9:00</td> <td><i>HCl</i></td> <td>EPA 1664      Abs (33) IR (22)</td> </tr> <tr> <td>2</td> <td></td> <td>grab</td> <td>1</td> <td>9:30</td> <td></td> <td>32      (22)</td> </tr> <tr> <td>3</td> <td></td> <td>grab</td> <td>1</td> <td>10:00</td> <td></td> <td>31      (21)</td> </tr> <tr> <td>4</td> <td></td> <td>grab</td> <td>1</td> <td>10:30</td> <td>→</td> <td>32      (22)</td> </tr> </tbody> </table> <p><i>pw temp:</i></p> <p>Online net (14) 2100 &amp; (10.1)</p> <p>Field test softiles: 130pm</p>			SAMPLE NO.	SAMPLE ID/LOCATION	GRAB/COMP.	VOLUME	DATE/TIME COLLECTED	Pre-serv	ANALYSES REQUESTED (METHOD)	1	<i>memo off D.O.</i>	grab	1	Date: 3-4-14 Time: 9:00	<i>HCl</i>	EPA 1664      Abs (33) IR (22)	2		grab	1	9:30		32      (22)	3		grab	1	10:00		31      (21)	4		grab	1	10:30	→	32      (22)
SAMPLE NO.	SAMPLE ID/LOCATION	GRAB/COMP.	VOLUME	DATE/TIME COLLECTED	Pre-serv	ANALYSES REQUESTED (METHOD)																															
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2		grab	1	9:30		32      (22)																															
3		grab	1	10:00		31      (21)																															
4		grab	1	10:30	→	32      (22)																															

Comments: Run #1: Hold rest:

Relinquished by:	<u>John Johnson</u>	Date: <u>3/21/17</u>
Received by:	<u>John Johnson</u>	Time: <u>10:00</u>
Relinquished by:	<u>John Johnson</u>	Date: <u>3/21/17</u>
Received by:	<u>John Johnson</u>	Time: <u>10:00</u>



Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**Prepared for:** Freeport McMoRan O&G  
C/O: LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
Attn: Steve Lawry

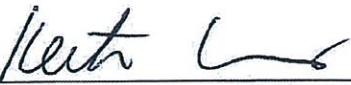
**Report Date:** March 14, 2014  
**Laboratory Number:** 140686  
**Project Name:** PF Harvest wk(2) NPDES weekly  
**Sampled by:** Client 3/11

On March 11, 2014, Capco Analytical Services, Inc. (CAS), received four (4) samples to be analyzed. The samples were identified and assigned the laboratory ID numbers listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
WEMCO/D.O.	140686-01
WEMCO/D.O.	140686-02*
WEMCO/D.O.	140686-03*
WEMCO/D.O.	140686-04*

\*HOLD PER CUSTOMER'S REQUEST

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

  
Keith Chin-Yuan Chang, Ph.D.

Director - Analytical Operations

cc: PF Harvest @-Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience.  
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Analytical Services, Inc.

Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

CERTIFICATE OF ANALYSIS

Client: Freeport McMoRan O&G (PF Harvest) Date Sampled: 03/11/14  
CAS LAB NO: 140686 Date Received: 03/11/14  
Analyst: GM Date Analyzed: 03/13/14  
Sample Matrix: Water

OIL & GREASE ANALYSIS  
EPA METHOD 1664

CAS LAB #	Sample ID	RESULTS (mg/L)	DF	MDL (mg/L)	PQL (mg/L)
140686-01	Wemco/D.O.	7.9	1	1	5

QUALITY CONTROL DATA

140686-MB	Method Blank	ND	1	1	5
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140686

**LTS Environmental, Inc.**  
704 Adirondack Avenue  
Ventura, CA 93003

**Report to FIM O&G c/o S. Lawry**

**Bill to:** Accounts Payable  
700 Milam Ste 3100  
Houston, TX, 77002

**3/18**

<b>805-644-4560</b>	<i>Harmst w/k(2)</i>	
<b>FACILITY:</b>	<u>Weekly NPDES</u>	
<b>COLLECTOR:</b>	<u>Normal</u>	<b>FAX:</b> _____
<b>PROJECT/CHARGE #</b>		
<b>RESULTS REQUIRED:</b>		
<b>RESULTS BY: PHONE:</b>		

SUBMITTED TO: \_\_\_\_\_ Capco Analytical Services \_\_\_\_\_  
REPORT TO: \_\_\_\_\_ PHONE: \_\_\_\_\_

Run #1 "Hold rest"

Relinquished by:	<u>John</u>	Date: <u>02-15-14</u>
Received by:	<u>John</u>	Time: <u>10:00</u>

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_  
Received by: \_\_\_\_\_ Time: \_\_\_\_\_

**Relinquished by:** \_\_\_\_\_ Date: \_\_\_\_\_  
**Received by:** \_\_\_\_\_ Time: \_\_\_\_\_



Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**Prepared for:** Freeport McMoRan O&G  
C/O: LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
Attn: Steve Lawry

**Report Date:** April 1, 2014

**Laboratory Number:** 140816

**Project Name:** PF Harvest wk(3), weekly NPDES

**Sampled by:** Client

3/22

On March 28, 2014, Capco Analytical Services, Inc. (CAS), received one(1) sample to be analyzed. The sample was identified and assigned the laboratory ID number listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
DIFFUSER	140816-01

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

A handwritten signature in black ink, appearing to read "Keith L".

Keith Chin-Yuan Chang, Ph.D.  
Director - Analytical Operations

cc: PF Harvest @-Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience.  
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Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**CERTIFICATE OF ANALYSIS**

Client: Freeport McMoRan O&G (PF Harvest) Date Sampled: 03/22/14  
CAS LAB NO: 140816 Date Received: 03/28/14  
Analyst: GM Date Analyzed: 03/31/14  
Sample Matrix: Water

**OIL & GREASE ANALYSIS**  
**EPA METHOD 1664**

CAS LAB #	Sample ID	RESULTS (mg/L)	DF	MDL (mg/L)	PQL (mg/L)
140816-01	Diffuser	13	1	1	5

**QUALITY CONTROL DATA**

140816-MB	Method Blank	ND	1	1	5
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Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**Prepared for:** Freeport McMoRan O&G  
C/O: LTS environmental, Inc.  
704 Adirondack Avenue  
Ventura, CA 93003  
Attn: Steve Lawry

**Report Date:** April 1, 2014  
**Laboratory Number:** 140817  
**Project Name:** PF Harvest wk(4) NPDES  
**Sampled by:** Client 3/26

On March 28, 2014, Capco Analytical Services, Inc. (CAS), received four (4) samples to be analyzed. The samples were identified and assigned the laboratory ID numbers listed below:

<u>SAMPLE DESCRIPTION</u>	<u>CAS LAB NUMBER ID</u>
D.O./NPDES	140817-01
D.O./NPDES	140817-02*
D.O./NPDES	140817-03*
D.O./NPDES	140817-04*

\*HOLD PER CUSTOMER'S REQUEST

By my signature below, I certify that the results contained in this laboratory report comply with applicable standards for certification by the California Department of Public Health's Environmental Laboratories Accreditation Program (ELAP), both technically and for completeness, and that, based on my inquiry of the person or persons directly responsible for performing the analyses, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Keith Chin-Yuan Chang, Ph.D.  
Director - Analytical Operations

cc: PF Harvest @-Orcutt  
Ruth Juris @-EDT

If you have any further questions or concerns, please contact me at your convenience.  
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Environmental and Analytical Services-Since 1994  
California State Accredited Laboratory in Accordance with ELAP Certificate # 2332

**CERTIFICATE OF ANALYSIS**

Client: Freeport McMoRan O&G (PF Harvest) Date Sampled: 03/26/14  
CAS LAB NO: 140817 Date Received: 03/28/14  
Analyst: GM Date Analyzed: 03/31/14  
Sample Matrix: Water

**OIL & GREASE ANALYSIS**  
**EPA METHOD 1664**

CAS LAB #	Sample ID	RESULTS		MDL (mg/L)	PQL (mg/L)
		(mg/L)	DF		
140817-01	D.O./NPDES	16	1	1	5

**QUALITY CONTROL DATA**

140817-MB	Method Blank	ND	1	1	5
-----------	--------------	----	---	---	---

Chain of Custody

1407

LTS Environmental, Inc. 704 Adirondack Avenue Ventura, CA 93003		Report to FFM O&G c/o Steve Lawry
FACILITY:  COLLECTOR:  PROJECT/CHARGE #	805-644-4560  Harvest wk(4) NPDES  Weekly NPDES	Bill to: Accounts Payable  700 Milam Ste 3100 Houston, TX, 77002  <i>4/4</i>
SUBMITTED TO: Capco Analytical Services REPORT TO: PHONE: COPIES TO: Platform Supervisor PHONE: 201 S Broadway, PHONE:		

**RESULTS REQUIRED:** \_\_\_\_\_  
**RESULTS BY: PHONE:** \_\_\_\_\_

LOV, G. B. ....  
Orcutt, CA 93455  
Ruth Juris

Comments: Run #1. Hold rest

Relinquished by:		Date: 3-28-14
Received by:		Time: 3/15
Relinquished by:	<hr/>	Date: _____
Received by:	<hr/>	Time: _____